Lecture
ON
FOREIGN BODIES IN THE AIR-PASSAGES.

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GENTLEMEN,—The subject of foreign bodies in the air-passages is one of considerable interest and practical importance. It is one of those subjects which may be said to occupy a neutral territory between the domain of medicine and surgery. The physician is not unfrequently required to assist in the diagnosis of a doubtful case, and also to advise as to the expediency of an operation, while the surgeon is often called upon to operate for the removal of the foreign body or to open the windpipe for the relief of urgent dyspnœa.

A foreign body may obstruct respiration, occasion much distress, and even endanger life, by becoming lodged in the throat, without entering the air-passages. A very remarkable case of this kind has been recorded by Sir James Paget.[1] The following is an abstract of this instructive case. In July, 1861, a gentleman, aged sixty, had one evening a fit of faintness or epilepsy. He wore sets of artificial teeth in both the upper and lower jaw. One set of teeth disappeared after the fit, and could nowhere be found. He sent for a medical man, who found him suffering from difficulty of swallowing and some dyspnœa; his tonsils, too, appeared enlarged and red. In a few days these symptoms abated, and he returned home. He then had increasing difficulty of swallowing, and a copious secretion of mucus, occasional vomiting, a short hacking cough, and once or twice he hawked up a little blood. There was not much pain, but a sense of constriction about the cricoid cartilage. The voice was rough and rather hissing, and his breathing was sometimes attended with a wheezing sound. Many times it was suspected that a foreign body was in the throat, but none could be seen; and when the lost teeth were spoken of, the patient declared that they were much too large a mass to have lodged in his throat, and that they must have been thrown away. The symptoms got worse, and in November, 1861, he came to London to consult Sir James Paget. His feeble appearance and emaciated look excited a suspicion of cancer of the œsophagus. On examination of the mouth and fauces, Sir James Paget could see nothing unnatural, until, by extremely depressing the tongue, he saw something white near the epiglottis. Then, passing his finger to the side of the epiglottis, he felt teeth, and hooked out a whole set, consisting of nine teeth with a gold plate and fittings. The mass had been impacted between the base of the tongue and the back of the epiglottis, the teeth being directed upwards, and the notch in the palate-plate next to the root of the tongue. After the removal of the foreign body the patient soon regained his usual state of health; but he has since had a violent fit of epilepsy, during which his medical attendant remarked that if his teeth had not been removed he must have broken them to pieces. This occurrence elucidated the former mystery. Without doubt the previous displacement of the teeth had occurred during a fit of epilepsy. I learn from Sir J. Paget that the patient has since died of brain disease and epilepsy. With reference to this case one remark suggests itself. If the throat had been examined by the laryngoscope, the teeth must have been seen immediately after they were lost, and the patient might have been spared much suffering.

In the following case, which occurred in my own practice, the laryngoscope was used with advantage:—F. C. W——, a fine healthy boy, aged a year and eight months, was brought to me on May 2nd, 1867, by his parents, who told me that, two days before, he had swallowed a copper penny. When the child was taken to his mother by a servant immediately after the accident, he was black in the face; his eyeballs apparently starting out; and he seemed to be in imminent danger of suffocation. These alarming symptoms soon subsided; and when the medical attendant arrived, he supposed that the coin had passed into the stomach. The child's father, feeling alarmed and anxious, took him to one of the hospitals east of Temple Bar, where the house-surgeon, after learning the history, said there was nothing to be done; but he desired that the patient might be taken to him again on the following day. When the child was brought to me, about fifty-two hours after the accident, I ascertained that, since the coin had disappeared, he had been quite unable to swallow solids, while the swallowing of liquids was attended with difficulty, and often excited coughing. Some water that I gave him to drink made him cough violently. There appeared to be much irritation about the throat, and there was a frequent discharge of salivary mucus from the mouth; this discharge was occasionally tinged with blood. Respiration was attended with a moist rattling noise in the throat. There were frequent fits of coughing, which almost entirely prevented sleep; the child looked weary and anxious, and the distressing symptoms had gone on steadily increasing. With such a history it could scarcely be doubted that the coin was impacted in the throat. Up to that time, the only treatment had been the administration of a dose of castor oil. Using a piece of soft wood to keep the mouth open, I endeavoured to reach the coin with my finger; but I failed to do so. Then, while keeping the mouth open by the wooden gag between the teeth, I introduced a small laryngeal mirror. At first, I found that the surface of the mirror became instantly smeared over and dimmed by the profuse mucous secretion from the throat, so that I could see nothing. I next swept the mucus out of the throat by a brush on a bent whalebone; then quickly introducing the mirror, I saw the coin sticking in the upper part of the œsophagus, the surfaces front and back, and the upper margin just below the opening of the larynx. I then took a pair of long, slender, curved forceps, opening front and back, and, guiding them by the throat-mirror which I held in my left hand, I seized the edge of the penny and brought it out. Immediately after the removal of the coin, the child retched and coughed violently for a few seconds. I then gave him some milk-and-water, and it was pleasant to see the eagerness and ease with which he drank it. From that time all symptoms of irritation rapidly subsided; but it was not until the third day after the removal of the penny that he could be induced to swallow solids. When I saw him again, a week after his first visit to me, he had lost all his discomforts, and he looked a model of health and happiness. It is probable that the alarming symptoms of suffocation which occurred immediately after the coin got into the throat resulted from the partial closure of the larynx, while the foreign body was sliding over the epiglottis on its way to the gullet. That the continued impaction of the coin in the gullet would have been speedily fatal by the extension of inflammation and swelling to the larynx scarcely admits of a doubt.

When a foreign body in the throat can be seen or felt, and reached from above, an endeavour should be made to extract it, and not at first to push it further down. In the summer of 1867 there was in the hospital, under Sir William Fergusson's care, a woman, who said that two months before her admission four false teeth had become displaced and lodged in her throat during sleep. She was awoke by a cough, with pain in the throat and dyspnœa, and she was unable to swallow her saliva. The doctor, when he arrived, at once endeavoured to push the teeth down the gullet by a bougie, and he repeated the attempt day after day. On her admission the mass was found to be impacted at the lower end of the gullet; Sir William Fergusson failed to extract it by means of the longest forceps that he could obtain, and the woman went out unrelieved. It is probable that when the foreign body was in the upper part of the gullet it might have been removed easily and speedily.

It is worthy of note that when a foreign body with an uneven surface has been caught in the throat and has scratched the mucous membrane, it often happens that an impression of the irritating substance being still impacted in the throat remains for a long time after it has been dislodged. In November, 1866, a surgeon called and told me that three weeks before a piece of bone had got into his throat and excited spasm. He immediately pushed a bougie down his throat, then he excited vomiting two or three times by thrusting his fingers into his throat. An uneasy sensation had remained in his throat from that time, and he believed that the bone was still lodged there. On examination with the mirror I saw no foreign body, but the mucous membrane

[1] Medical Times and Gazette, Jan. 18th, 1862.

of his larynx was congested. This may have been partly caused by his somewhat rough treatment of himself, partly a result of catarrh, from which he was then suffering. He was a nervous, anxious man, and I had some difficulty in persuading him that the bone was not then in his throat.

A *complete* closure of the larynx by a foreign body may cause very sudden death. On the table there is a specimen showing a piece of an orange impacted beneath the epiglottis, and completely plugging the larynx. This caused instant death.

A *partial* closure of the larynx may cause gradual apnœa with some of the symptoms of apoplexy, and the diagnosis may be doubtful. The following case occurred to a former pupil of this College, from whom I obtained the history:—An elderly man, an inmate of a prison, suddenly fell down while at dinner, and was supposed to be in a fit. When the surgeon arrived he found the man blue in the face, and breathing stertorously. Suspecting that there might be some foreign body in the throat, a probang was passed, and it was thought that something had been pushed down the gullet. The symptoms continued, and the man died in the course of the afternoon. After death a piece of tendon of meat was found under the epiglottis. There was an inquest, and the surgeon was blamed for not having performed tracheotomy, which of course he would have done if he had known the real state of the case. Here again the laryngoscope might have shown the true cause of the symptoms.

A foreign body may enter the larynx, and remain there, causing much distress for a variable period. Some years ago, before the laryngoscope had come into use, Mr. Partridge had in the hospital a boy, about five years of age, who got a button in his larynx. There was aphonia, with stridulous and difficult breathing. Tracheotomy was performed, and an attempt made to detect and remove the button by passing a probe upwards through the wound. The button was never found, but the distress gradually subsided. The tracheal opening was allowed to heal, and he went out still suffering from hoarseness. Here, again, the laryngoscope would have been of use for diagnosis, and possibly for extraction. In the summer of 1867 I examined the larynx of this patient, then a young man. The mucous membrane was thickened, and the true cords were red and uneven. This condition rendered him still rather hoarse.

Dr. Sanderson and Mr. Hulke have published[2] an interesting case which occurred to them at the Middlesex Hospital. On Nov. 2nd a muscular man, aged twenty-seven, in good health, was talking while he had a sixpenny-piece in his mouth. During the act of laughing the coin disappeared, and he immediately fell to the ground suffocated. A surgeon who was called in thought him dying, and took him to St. Mary's Hospital, where he arrived in three-quarters of an hour from the time of the accident. He said the throat was examined, but nothing found. Soon the breathing became easier. He remained there until 1 o'clock the next day, when he was discharged at his own request. His breathing was quite natural, but he could not speak above a whisper. He attended for a fortnight as an out-patient, having a sore-throat and some pain, and difficulty in swallowing liquids. His voice remained as before — whispering. He lost flesh and strength; but in other respects he was in fair health, and had no difficulty of breathing either on exertion or otherwise. On the 3rd January his breathing became suddenly embarrassed, and at 12 o'clock he was taken to Dr. Sanderson, who, suspecting that the coin was still in the throat, told the man to go to the hospital for laryngoscopic examination. On returning home, and going up stairs, he was suddenly seized with a feeling of suffocation as urgent as immediately after the accident. He rushed down stairs in agony, and in so doing tripped; thereupon the dyspnœa suddenly ceased, and he was again able to breathe as freely as ever. Next day, at 2.30, he went to the hospital. The breathing was only slightly embarrassed. The sixpence was at once seen lying flat across the glottis, the edge in the ventricle on either side. Behind the edge of the coin there was a breathing space between the arytenoid cartilages. The mucous membrane was red and puffy. It was considered impossible to seize the coin with forceps from above on account of its horizontal position. Bent loops of wire were prepared for the purpose of jerking it out. Attempts were made to dislodge the coin by holding the man's head downwards, and slapping the back of his neck, while he was directed to cough, but could not on account of his inability to fill the chest. The respiratory murmur was everywhere inaudible. Then it was resolved to perform tracheotomy. This was done under chloroform, and an attempt was made to seize the coin by forceps introduced from below through the opening. The coin could be felt but not seized. The forceps passed behind the coin through the glottis, and could be felt by the finger introduced through the mouth. The coin was at length pushed upwards within reach of the finger, by which it was drawn forwards over the epiglottis on to the root of the tongue. At this moment, by a sudden gulp, the coin was swallowed, and the breathing was free. The next morning the coin was passed by stool. The wound healed, and recovery was complete.

In December, 1870, my colleague, Mr. Henry Smith, had under his care a hospital patient in whose larynx a half-sovereign was impacted. The man, while intoxicated, having placed a half-sovereign in his mouth, the coin disappeared, and the patient was suddenly seized with dyspnœa, which for a time was urgent. Four days afterwards he came under Mr. Smith's care. Meanwhile he had continued to suffer from pain in the throat, loss of voice, difficult and stridulous breathing, dysphagia and cough, with copious mucous expectoration. Asked by Mr. Smith to make a laryngoscopic examination, I had no difficulty in demonstrating the presence of the coin in the exact position of the sixpence in Dr. Sanderson and Mr. Hulke's case, to which I just now referred. The metallic surface formed a striking contrast with the congested and swollen mucous membrane by which the margins of the coin were overlapped. So tightly was it impacted that it would evidently be impossible to dislodge it by placing the man head downwards. With Mr. Smith's concurrence I attempted to seize it with the laryngeal forceps, but although I could touch the surface of the coin, I found it impossible to grasp its margin. I then suggested to Mr. Smith that if he made an opening below the glottis, he might push a bent probe against the under surface of the coin, and so thrust it into the mouth. Accordingly Mr. Smith made an opening in the crico-thyroid membrane, introduced a strong silver probe, and, using considerable force before the coin could be dislodged, he pushed it into the man's mouth, whence it was immediately ejected. The operation was very neatly and cleverly done in the space of about three minutes, and the man made a rapid and complete recovery. (See Mr. Smith's history of the case, with a woodcut, *Brit. Med. Jour.*, Jan. 7th, 1871, p. 7. On the same page of the Journal Mr. Pridgin Teale records a case in which a piece of bone, having been impacted in the larynx, was removed through an opening in the trachea.)

In a case which occurred some years since at Birmingham, a buckle having remained eleven months in the larynx of a child ultimately caused death. The case is recorded as follows:—"Mr. Oliver Pemberton read notes of a case of foreign body in the larynx, and exhibited the post-mortem appearances of the same. The child, seven years and a half old, came under Mr. Pemberton's care in August last. She was said to have swallowed in the September of the previous year a portion of a japanned buckle. She was seen by a surgeon within half an hour of the accident, when she presented an anxious appearance, and suffered from difficulty of breathing and loss of voice. There was no difficulty in deglutition. The symptoms began to abate, and when Mr. Pemberton saw the child she was healthy, and suffered no inconvenience beyond the weakness of voice; there was no strider; and no abnormal physical signs could be observed upon auscultation of the lungs or of the larynx. On account of the absence of urgent symptoms laryngotomy was not deemed advisable, and the child returned home. Three days after her return she was seized with violent vomiting from an overloaded stomach. This probably stirred the foreign body, set up inflammation of the laryngeal mucous membrane, and caused death. The body of the buckle, an inch long, was found lying vertically in the larynx posteriorly, while the teeth lay in the angle of the thyroid cartilage."

Dr. Stokes[3] gives a curious case of a boy who made a whistle of a plum-stone by perforating it on each side and removing the kernel. While he held this between his lips it passed, during a deep inspiration, into the larynx, and became fixed there. So little inconvenience did this occasion at first, that, on finding he could still whistle through the stone, he went about some hours, pleased with this new and convenient mode of blowing his whistle. He then got paroxysms of suffocative cough, with pain in the throat and

[2] Medico-Chirurgical Trans., vol. xlviii.

[3] Diseases of the Chest, p. 291.

epigastrium, a bloated countenance, and a quick pulse. The chest was clear on percussion, and the respiratory murmur natural. The whistling in the larynx sufficed for the diagnosis, and tracheotomy was performed. During the performance of the operation the boy declared that he had coughed up the stone and swallowed it. The symptoms were relieved, and the whistling had ceased, but as the wound closed the distress and the whistling noise returned, proving that the stone had remained in the larynx, and that the noise had ceased only in consequence of air having been admitted below. Soon after, it was found to change its position and to pass down the right bronchus, again to be driven upwards into the larynx. By a second operation it was extracted, and the boy recovered without a bad symptom.

It has usually been observed that when the foreign body has become impacted in the larynx the symptoms from the first have been violent and distressing. The ordinary symptoms have been incessant spasmodic cough, croupy breathing, hoarseness, or complete aphonia, pain in the region of the larynx, and fits of suffocative dyspnœa. The termination of the case may be by sudden death, in consequence of closure of the glottis; or the foreign body may be expelled, or it may fall into the trachea. Then there may be an interval of comparative ease, succeeded either by a return of laryngeal symptoms, if the body is movable and light enough to be coughed upwards to the larynx, or, if it remains impacted in the bronchus, symptoms of inflammation of the lung may supervene.

An inspection of the widely open state of the glottis during deep inspiration shows that bodies of considerable size may easily pass between the vocal cords. A curious variety of substances have passed "the wrong way" and got into the bronchi. Thus the root and fangs of a tooth, an artificial tooth, a piece of bone in several instances, a cherry-stone and a plum-stone in several instances, a piece of flint, a button in two cases, a head of grass in two cases, an ear of rye, a Portugal ducat, a half-sovereign (Mr. Brunel's case), a sixpence, a shilling in two cases mentioned by Sir Thomas Watson, a piece of slate-pencil, a nut, a piece of nutshell, a piece of walnut-shell,[4] a piece of nutmeg, a piece of cheese, a glass-bead, a leaden shot one-eighth of an inch in diameter, an iron nail, a metallic screw, a kidney-bean, &c.

(To be concluded.)

NOTE ON THE

TREATMENT OF ULCERS AND VARICOSE VEINS BY MARTIN'S STRONG ELASTIC BANDAGE.

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HAVING for some time used the elastic bandage as recommended by Dr. Martin, of Boston, U.S., for the treatment of varicose veins and ulcers, it is right to express my opinion that his treatment is practically good. Under its influence, ulcers not of a specific character do certainly heal, and quickly; and as this is effected whilst the patient follows his usual occupation, the merit of the treatment is evident. Although there has been scarcely time since I received the bandages from America for use in St. Bartholomew's Hospital[1] to test their efficacy in the continued treatment of varicose veins, yet I have found that the application of the bandage is at once followed by a sense of great relief. A man of thirty-six years of age, who had suffered for eleven years from varix of either internal saphenous vein, extending as high as the groin, experienced at once and since greater relief from the use of the bandage than he had ever had from silk elastic stockings, although his position was such as to allow of his wearing the best which could be made for him. I have used the bandages for many cases of ulcer of the leg, chiefly due to varicose veins, and always with the good result stated by Dr. Martin, with whose practical statement respecting the treatment of these ulcers I agree.

There are some points named by Dr. Martin which are essential if good results are to be had. The first of these is as to the quality of the bandage itself. It should be just such as the author describes, and as is supplied from America. If thicker, it would be clumsy; and if thinner, it needs to be more tightly drawn to offer the due resistance, and the edges are more apt to indent or cut into the flesh. If Dr. Martin's treatment is to be tried, the bandages should be such as his experience has led him to prefer.

The bandage should be applied before the patient rises from his bed in the morning—before, that is, the veins of the leg become distended by the impeded column of blood within them. It should be applied with just snugness enough not to slip down. The moment the foot is put to the ground the limb is so increased in bulk by the increase of blood in the veins that the bandage becomes of precisely the proper degree of tightness, and, no matter how active the exercise or labour of the patient, it will remain in position all day. When the patient undresses at night the bandage is to be removed, and the limb wiped dry, a piece of soft old linen moistened with oil, or some equally simple dressing, laid on the ulcer and retained in place by a few turns of an ordinary roller. The bandage should be sponged with water (cold will do, but warm is better), and hung over a line to dry in readiness for the morning, or it can be wiped dry at once, or rolled up with the tapes in the centre. Such is the dressing for the night; in the morning the leg can be washed, but, whether it is or not, all traces of oil or cerate should be carefully wiped away, as contact with the bandage of any fatty matter would tend gradually to injure the rubber. This is the whole treatment. Rubber bandage all day, with erect position and exercise. The simplest possible dressing (merely to protect the ulcer from injury), with the horizontal position and rest, all night. Any pimples which may form are left to be treated by the rubber, and if the skin become chafed a light covering, as of bunting, is applied as a bandage under the rubber, and the same is recommended to absorb excessive moisture.

No more distressing cases than of patients suffering from chronic ulcers crowd our hospitals, and I must say that I feel much indebted to Dr. Martin for the suggestion he has published, and which he has made practical application of for many years with, as he says, great success. My present but recent experience leads me to believe that he is to be confirmed in the statement he makes, and which any who like can read, as it is very clearly and ably put in the Transactions of the American Medical Association for 1877.

[4] Dr. Gibb: Path. Trans., xiv., 41.

[1] The bandages are now supplied by Messrs. Krohne and Sesemann.

A NEW OPERATION FOR THE CURE OF DETACHMENT OF THE RETINA.

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THE effusion of serum between the retina and choroid, in an eye which is otherwise healthy, gives rise to the pathological condition called "detachment of the retina." This condition manifests itself to the patient first by dimness of vision; then by interruption of the field of vision—i.e., he sees when looking in one direction, but when trying to look in another a cloud seems to intervene between him and the object. Ophthalmoscopic examination by the mirror alone shows, in the first stage, a slight undulation of the retina. When further advanced a regular grey elevation becomes visible, which screens a part of the fundus when the eye is in motion. When examined more closely by the erect image, the retinal vessels are seen crossing its surface (partial detachment). This grey opaque body gradually increases in size, and the subretinal fluid accumulates until no part of the fundus can be seen. This stage coincides with total loss of vision, and the detachment is said to be complete.

This affection is still classed among the incurable diseases to which the eye is subject. All medical treatment by the administration of mercury, artificial leeching, &c., has proved worse than useless. Von Graefe introduced an operation by puncturing the retina with a needle, and allowing the fluid to burst into the vitreous humour; and

Mr. Bowman performed the same operation with two needles, but I am not aware that this operation has ever been adopted by any other surgeon. The reason is obvious, for when the detachment is partial one feels reluctant to thrust a needle into the retina with the chance of depriving the eye of the little sight it has, and when the fluid has risen to the point of screening the whole fundus, that operation offers hardly any chance of success. Mr. Brudenell Carter, who saw von Graefe perform it, and from personal experience, states his appreciation of it as follows:—"My own experience does not enable me to recommend it, or to urge its performance otherwise than by saying that it may possibly do some little good, and that it is not likely to do harm."[1]

The fact that De Wecker has, after repeated trials, abandoned it, and used instead a cannula-needle for withdrawing the fluid, and that he more recently tried drainage by inserting gold wire into the sclerotic, is sufficient proof that the problem of getting rid of the subretinal dropsy is still to be solved. And a very important problem it is, for the number of patients who have lost their sight from that cause is very great indeed.

To rescue this affection from the list of incurable diseases by means of an operation has been my endeavour for a considerable time past. Having observed in cases of laceration of the sclerotic how satisfactorily the wound heals without injury to the sight, if we effect coaptation, I have come to the conclusion that the safest and most satisfactory operation for removing the fluid is by cutting down upon the sclerotic and evacuating it. In pursuing my investigations upon this subject a case has recently presented itself to me which I consider worthy of record.

Complete detachment of the retina in both eyes; operation; restoration of vision in both.—Miss A. L——, aged fifty-eight, who has enjoyed perfectly good health all her life-time, felt her eyes beginning to get dim in October, 1877. In January last she consulted an eminent oculist in the east country, who pronounced her case to be disease of the retina, and therefore incurable. She consulted me towards the end of January, when I found in the right eye a retinal dropsy complete, and the left progressing in the same direction. Fearing that an unsuccessful operation on the right eye might get the credit of causing the blindness which I expected to come on in the left, I refused interference. She came back again in May, when I found the detachment complete in the left also, vision entirely abolished. As the case was anything but encouraging, I was still unwilling to do anything. When her friends brought her back in the beginning of last month I found the blindness so complete that she could not follow the flame of a gas-burner moved within a few inches of her eyes, but as they were very anxious that she should have the benefit of any chance an operation might offer, I operated on the right eye on Sept. 18th, being assisted by Dr. Pickering and others.

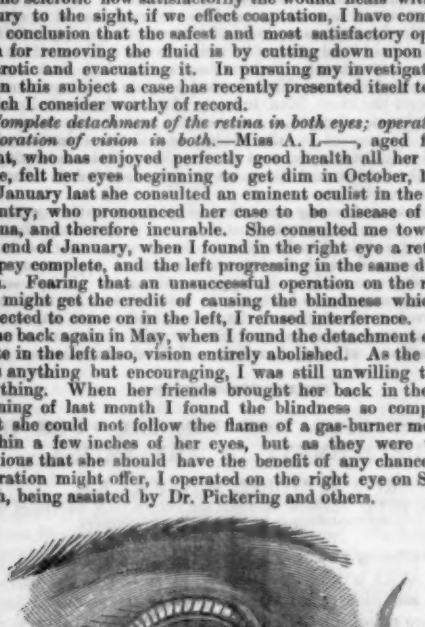

FIG. 1—indicating the position of the incision.

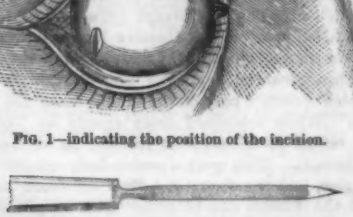

FIG. 2—representing the Sclerotome, which is made by Luer of Paris, and may also be had of Weiss (London) and Hilliard (Glasgow).

The patient being put under chloroform, and a speculum introduced, the assistant fixed the eyeball with guttapercha-tipped forceps. I made a vertical slit into the conjunctiva and subjacent tissue, laying bare the sclerotic, below the equator of its anterior aspect. I separated the lips of the wound by two small strabismus hooks, and the assistant steadily maintaining the position of the eyeball to prevent the exposed portion of sclerotic from shifting, I introduced Wecker's sclerotome, made of nickel-plated German silver and sharpened at the point only, into the sac formed by the fluid, making the incision through the sclerotic obliquely in such a manner that the edges of the scleral wound should overlap each other when the knife was withdrawn. I then withdrew the knife gently, using, at the same time, pressure on the eyeball in the track of the receding knife, and a quantity of serum came along with it. To make sure that the whole fluid was evacuated, I used a little more gentle friction and pressure along the course of the wound. I then brought the lips of the external wound together with a fine silk ligature, and strapped both eyelids with court plaster.

I was much struck with the peculiar condition of the conjunctiva. Although the forceps were tipped with guttapercha, the slightest touch caused it to tear, as if dropsical fluid had penetrated into the superficial structures.

The patient was kept in bed in complete darkness for three days. Not the slightest reaction having taken place, the plaster and ligature were removed on the sixth day, and the eyes gradually accustomed to the light. On the eighth day I removed the bandage, with the view of testing her sight, which I found to be highly satisfactory; indeed, there was no need to ask her the condition of her sight, for the intelligent facial expression at once indicated the result obtained. She could distinguish persons distinctly, and count fingers in all directions at two feet distance. Improvement has been progressing until now, this being the twenty-second day since the operation; she can see the time to a minute on a white-dialed watch without the aid of glasses, and distinguish between shades of colours—as red and pink, green and blue. Ophthalmoscopic appearance seems to me highly satisfactory. The remarkable feature in connexion with this case is that the result, both visual and ophthalmoscopic, is more perfect in the left than in the right eye. I am not aware of any other reason to account for this remarkable phenomenon, except by ascribing the cause of the original mischief in the one eye to disease of the trophic nerves, which, when it has reached a certain stage, reacts sympathetically on the other. When the effusion of fluid, therefore, has been withdrawn from one eye, that in the other disappears by absorption. It may be considered analogous to what I have seen in some cases of sympathetic ophthalmia, the vesicular eruption of herpes frontalis over an uninjured eye disappearing immediately after the removal of the cause of the mischief.

Glasgow.

[1] Practical Treatise on Diseases of the Eye. London, 1875.

A FILTH-POLLUTED SOIL.[1]

BY JOHN SPEAR, L.R.C.P., M.R.C.S.,
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To say that upon the purity of the soil upon which we dwell depends intimately and inseparably the purity of the air we breathe may appear at first sight so strite and obvious a remark as to be unnecessary. And yet it will be admitted the lessons that such a doctrine conveys are almost universally ignored, for is not the pollution of the soil a necessary attribute of all, or nearly all, our systems of refuse removal? Does not the system of refuse-disposal still sanctioned and required by the majority of our municipal bye-laws depend, for any slight amount of freedom which it may possess from the more obvious and grosser nuisances, upon the very capability of the middenstead to allow of soakage of foul liquids into the surrounding earth? Is it not a fact that many sanitary authorities systematically permit the refuse collected by them to be deposited on vacant spaces in the midst of their towns, or even on the sites of future habitations? And, lastly, is not the burial of the dead in the midst of many towns still permitted? The truth, obvious though it be, is clearly in practice not

[1] A paper read before the Northern Counties Association of Medical Officers of Health.

recognised. The dangers that result from its neglect are either not understood or, more often, as there is every reason to believe, the purifying influence which earth, under favourable circumstances, and to a certain extent, undoubtedly exerts upon dead organic matter, is in the minds of many, even of well-informed people, greatly and most mischievously exaggerated.

It might be easy perhaps to refute this latter fallacy by reference to the annals of any one country, or of any single age; but for our present purpose we may more agreeably, and I think more instructively, extend our view; and I will therefore in the first place direct attention to the history of somewhat remote periods and of distant climes. We may afterwards restrict our observations to our own age, and, lastly, to our own English towns.

In the selection of sites, and in the maintenance of the virgin purity of the soil, the ancients, we gather, were in practice "in advance of the present age." From the Mishna, or Jewish traditions, we learn how carefully all unclean things were removed from the vicinity of Jerusalem and the Temple, and the investigations of Signor Perotti in that ancient city have revealed how complete were the systems of sewers and the means of sewage precipitation and disposal; the present Fountain of the Virgin, by the way, being, it seems, devoted originally to the latter most useful purpose. We find again that the Latin author, Vitruvius, in his work entitled "De Architectura," supposed to have been written in the time of the Emperor Augustus, giving directions for securing healthy sites for towns, lays special stress on the necessity of a porous soil, and, in order to secure the ventilation of that soil, on perfect subsoil drainage. The views also of Hippocrates on this subject, as given in his remarks "On Air, Water, and Places," of Pliny, and of other classic authors, might be studied at the present day with advantage.

And then, as to practice. In the ancient cities of the world — in ancient Rome, in Carthage, Herculaneum, Nineveh, and Alexandria, we know how well pollution of the soil was guarded against. What most judiciously executed works for this and other sanitary objects existed recent discoveries have revealed. Probably in all these places, too, and certainly in Rome, the burial of the dead within the city walls was forbidden. It is worthy of note that at this period of history, pestilences and epidemics were not of common occurrence, and when they appeared they were usually clearly traceable to famine or to war. But to this enlightened and golden age succeeded one of darkness and intellectual torpor. Sanitary measures were forgotten or ignored; filth accumulated in crowded towns; the practice of intramural sepulture—a perversion of the practice of the early Christian Church—became general. The soil, the air, the water, we read, were impregnated with decomposing matters. As a result, we have recorded those most destructive pestilences of the Middle Ages. The plague, the black death, fever, and small-pox, swept over the land, and worked cruel havoc and devastation amongst the nations of the world. Cities, we are told, were depopulated; "despair having attended the sick," none were left to bury the dead.

There is little to indicate that at this time the causes of these dreadful visitations were generally, or even remotely, suspected. On the contrary, we know that they were almost universally attributed to some malignant and powerful, but unknown and mysterious, influence; that, in short, the grossest superstition reigned, and that pestilences, like scurvy in Arctic expeditions of the present day, were ascribed to the pleasure of Almighty God. Yet even at this time a certain few enlightened men appear to have fathomed the true cause of these calamities; and, perhaps as the first glimmer of returning dawn, we find the magistrates of Neuremberg, in the fifteenth century, after the "sweating sickness" had thinned the ranks of the people, making provision for the burial of the dead beyond the city gates.

In our day authors concur in regarding a filth-polluted soil as one principal factor in the causation of these disasters of the Middle Ages. Coming to our own age, and the pestilences of modern times, we look for more exact data on which to base such conclusions. And, in our inquiries, we turn first naturally to India, as the birth-place of cholera, and especially perhaps to Lower Bengal, its peculiar home. Nor need the constant and often excessive prevalence of cholera be the only cause for investing this region with, to us, special interest; for it is clear from the Government Reports from the sanitary districts there that, destructive as cholera undoubtedly is, fever numbers at least, except in periods of excessive epidemic prevalence of the former disease, five times as many victims. Thus, while in the two years 1873–74, the average annual number of deaths registered from cholera in Bengal proper was 60,621; from fever it was 324,450;[2] whilst diarrhœa and dysentery, as a still further point of interest, were together only a little less fatal than cholera.

Now, of these Bengal fevers, a large amount of concurrent evidence goes to prove that cases of true typhoid form at least no inconsiderable portion of their number. The death-returns from the troops (such returns being, I believe, always based upon the evidence of a post-mortem examination) prove this, I think, conclusively. In 1874, in the European army of India, the deaths from enteric fever, as compared with those from malarial fevers, were twice as numerous; and in the Bengal army enteric fever heads the list of fatal maladies. The thoughts and writings, then, of Simon must occur to us—as his thoughts and writings must always do when points of preventive medicine are in question—at this juncture; for he has long and forcibly insisted upon the close etiological affinity between cholera, typhoid fever, and diarrhœa.

Of the origin or conditions of spread of cholera, or indeed of typhoid fever, in India, it must be confessed we have little but negative evidence. As to the former disease, the Army Sanitary Commission, or rather their chief advisers, have of late somewhat shocked European medical opinion by refusing to recognise any evidence of its propagation either by contaminated drinking-water or by the agency of human intercourse. And against the theory which would suppose a diffused morbific influence in the atmosphere, an "epidemic wave" of cholera poison, independent of local conditions, and controlled only in its movements by currents of air and the direction of the wind, a host of well-founded objections may be raised.

Of the potency of contagion, or of the influence of drinking-water contaminated by choleraic discharges, there can scarcely—having regard to European experience—be reasonable doubt; but it must be admitted that, singly or collectively, the agencies I have referred to fail to account for some of the most important phenomena observed in every epidemic of the disease. How, for instance, can its peculiar localisation, so repeatedly noticed in India and elsewhere, be explained? When men at a military station are subject to apparently precisely the same conditions of temperature, water and food supply, exposure to contagion, work, exercise, clothing, age,—why do those occupying one hut or barrack suffer intensely, whilst others in a hut adjoining, or even in a part of the same building, escape unscathed?

The effect of a high temperature also in increasing the severity of an epidemic, and, conversely, of a low temperature in arresting, or in tending to arrest, its course—an effect so repeatedly noticed in all climates—can neither by contagion nor by the water theory alone, be satisfactorily explained, except, as regards the latter, in so far as the pollution of the water is a secondary filth infection from the soil.

Such phenomena, it is scarcely too much to say, can only be accounted for by taking into consideration the influence of the soil; and, adopting this opinion, it will at once be seen how many otherwise incongruous views are at once explained and reconciled. The observations as to contagion remain unaffected; the occasional, if not frequent, spread of the disease by drinking-water is understood, the influence of temperature, and the apparent influence in many cases of the subsoil water, are, to say the least, more satisfactorily accounted for; even the peculiar localisation of the disease, as recent researches are likely to show, we may hope to see explained. For it is well known that the temperature of the soil, even at a considerable depth, consistently follows, only disturbed by occasional falls of rain, that of the atmosphere, while the influence of the sun's rays on the surface may be excessive; and Professor von Pettenkofer has shown that the activity of organic decomposition in the soil bears a distinct relation to its temperature. Thus, during the winter months of 1871–72 in Munich, the average amount of carbonic acid in the soil-air was 4 volumes per 1000. In June of both years the amount rapidly increased, until in August, 1870, and July, 1871, the proportion equalled 16 and 26 per 1000 volumes respectively. Drs. Lewis and Cunningham, fol-

[2] It should be remarked that, enormous as these numbers appear, and while they indicate pretty accurately the relative fatality of the diseases named, it is calculated that, owing to defective registration, not a fourth of the number of deaths in this presidency are recorded.

lowing up these observations in Calcutta, failed, it is true, to discover the constant coincidence of these two conditions; their observations tended rather to show a connexion between the amount of carbonic acid present and the rainfall, the period of elevation of the former corresponding with the period of greatest dampness of the soil; but, inasmuch as they extended over a single year only, the observations cannot be taken, as the reporters are careful themselves to point out, as conclusive. They established, however, the interesting fact that in the same soil, within a very circumscribed area, the changes in progress (as indicated by the amount of carbonic acid present) may vary, at least in degree, very materially. Thus, at two points of observation, within fifty yards of each other, the amount of carbonic acid six feet from the surface (per 1000 volumes of air) averaged in the one case 9½, whilst in the other it averaged only 6, volumes. So that, as the observers say, if the processes in operation in the soil have any influence on health, the people inhabiting one end of a building will be exposed to different hygienic conditions from those living at the other end. This discovery cannot fail to remind us of the frequent peculiar localisation, already spoken of, of cholera outbreaks; how, for instance, at Meerut in 1867, the 3rd Buffs were literally more than decimated, whilst the 19th Hussars and the Sepoys, living apparently under the same hygienic conditions, were as healthy as if in England.

Turning, however, from these observations, of whose true import we are as yet wholly in ignorance, we come upon the undoubted fact that, of all the causes ever suggested to account for the origin or spread of the disease this one of impurity of soil, as a living fact in cholera's endemic home, stands out with the most glaring distinctness. We know that the plains of Bengal have been formed, and are still being formed, by the gradually accumulating mud brought down by the Brahmapootra and the Ganges—mud which, largely consisting of putrescible animal and vegetable matters, exposed to sun and rain, continues to decompose; and that, moreover, systems of drainage and refuse-removal being until recent years unknown, the soil around villages, stations, and highways of religious pilgrimage—soil it may be devoid of vegetation, and having the ground water a foot or two only from the surface, is thoroughly saturated with human excrement, the accumulated pollution of thousands of years. Of these facts, and of their admitted significance, almost every page of Indian sanitary reports teems with instances; and, *à propos* both of the pollution of the soil and of one means of its depollution, I would refer to a most suggestive remark by the Bengal Sanitary Commissioner, when in a recent report, speaking of one of his districts, he says:—"The dreaded Terai is again becoming inhabited and healthy, just in proportion as the soil is cultivated, and the decomposable matter in it taken out." Again, from a report of the Health Officer of Calcutta:—"Though the chief thoroughfares are cleansed, the city in its inward parts has its soil saturated with excrement." Or, in reference to Pooree, the seat of the Juggernath pilgrimage:—"The difficulty in dealing with this holy city lies in the fact that it has long been used up. The whole soil is so polluted that nothing short of deserting it would be a sufficient protection from cholera."

The noxious condition of the soil is, in short, undoubted; and it is a condition, it is clear, which, far from being involved in mystery, as was once supposed, may, unless under circumstances of soil and subsoil specially favourable to their self-purification, by neglect in the proper removal of effete matters, be speedily manufactured, so to say, by any considerable collection of human beings. Thus the hill stations of India, once usually free from epidemics of cholera, in spite of the necessarily frequent importations of the disease, have lately suffered from the scourge severely. The want of sanitary appliances in these stations is notorious. "Being generally on ridges and near ravines," says the Royal Commission on the Sanitary State of the Indian Army, as long ago as 1863, "great facilities are offered for perpetrating all kinds of nuisance." And at Simla, the mountain sanatorium of Bengal, where, in the words of the Commissioners, "the climate is extremely healthy," but where the grossest sanitary defects have long existed, sickness had been increasing during 1874 and 1875 in an alarming and progressive ratio. In the latter year, the general unhealthiness culminated in so severe an outburst of cholera that the temporary abandonment of the station was contemplated. The attack was concentrated on that part of the station enclosing a ravine such as those previously referred to.

The remedy suggested in this case reminds us of the custom in the army when the troops are in the field or in military stations abroad. If cholera or fever break out the order is to march. The encampment may be moved only a very short distance; the water-supply may be the same; the same "epidemic influence" in the atmosphere, if such existed apart from any fixed and purely local polluting agency, would scarcely be escaped; and yet the movement, with due care in the selection of the new site, is almost always successful, sick men and infected bedding and clothing notwithstanding. Can anything be more suggestive?

Pettenkofer's views on the etiology of cholera and typhoid fever have not met with general acceptance; and in so far as the special significance which he attaches to the variations of the subsoil water-level is concerned, they have perhaps, in this country and in India, been in a measure disproved. But that part of his theory which most concerns us—the impurity of the soil from animal impregnation—is by no means touched by the adverse observations to which his views have been subjected; on the contrary, they merely prove that he has raised to a major position a factor that should hold a subservient place. Beyond this, his observations have even received confirmation. Buchanan's researches for instance, often quoted in refutation of Pettenkofer's views, prove that by the permanent drying of the subsoil the mortality from both cholera and typhoid fever is diminished. But this permanent lowering of the subsoil water is quite a different matter from that occasional fall which Pettenkofer in his theory contemplates. The one would result in the ventilation and, to some extent, permanent purification of the soil; the other would only afford increased facilities for the decomposition of impurities already collected. Buchanan's report, again, appears to contain, in one or two instances, some evidence of increased fatality of typhoid fever during the actual progress of sewerage works, as at Croydon and Penzance; and this, I dare say, would correspond with the experience of many observers. The fact, I need scarcely point out, is strongly corroborative of Pettenkofer's theory.

Time will not permit a closer investigation of Pettenkofer's views, interesting as they are, and closely as they bear upon the subject matter before us. When, for instance, he journeyed to Gibraltar and Malta to inquire into the circumstances of the cholera epidemics there, how suggestive the reply of the medical officer at the former place. "Our rock," said Mr. Inglett, "is not a rock in your sense; it is a sponge impregnated and soaked with every kind of sewage." And the same might have been said with almost equal truth of Malta. It will be remembered that at both these stations, with naturally exceedingly healthy climates, epidemics of cholera and yellow fever have proved most destructive, whilst typhoid fever is, or until lately has been, an endemic and fatal malady.

(To be concluded.)

NOTES OF A

CASE OF INTRA-CARDIAC THROMBOSIS.

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BY thrombosis, as is well known, is meant a local coagulation of blood during life either in the heart or a vessel; the resulting clot is named a thrombus. The causes are: Anything which impedes or retards the blood current; valvular and other organic diseases of the heart; pressure on its cavities, or mere feeble cardiac action; also, the blood condition sequential to fevers and chronic wasting affections, diseases of the lungs, such as pneumonia, croup, and rheumatic fever; dilatation of vessels, particularly in aneurism, varicose veins, and distended venous plexuses; certain conditions of the blood; hyperinosis or increased proportion of fibrin arising in various acute inflammatory affections, and pregnancy; probably, also, pyæmia and allied states, and anæmia. Increased heat of the blood, either local or general, has been looked upon by Richardson and others as a probable causes of thrombosis. The puerperal state also, which gave rise to the following example of the affection, very frequently originates the thrombal stagnation. In many in-

stances more than one cause has contributed to the clotting process. The effects of thrombosis will vary with the rapidity of its production, its seat, and its extent. The dangers are, that it may give rise to serious obstruction of the circulation and interference with the heart's action. When its seat is in the pulmonary artery, it may prove even instantaneously fatal. Portions of a clot may become detached and lodged in one of the main orifices, or in an arterial trunk; or particles (so-called emboli) may be conveyed from the main clot into the smaller vessels of the brain, and various other organs. The softening of a clot may poison the blood generally. A very important part has been played by thrombosis in the pulmonary artery in women who have died suddenly after parturition. The following case occurred in my practice:—

Mrs. L——, aged thirty-three years and a half, was delivered of her fifth child on the 9th May, 1873. Her first was by forceps, the remaining ones by natural course. After the fifth, which was safely gone through, there was slight post-partum flooding, which was soon checked. She progressed favourably until the evening of the fifth day, when, at her request, she was allowed to have her clothes on and recline on her bed; but she did more than this, and put her feet to the ground for a short time. On the same evening she was disturbed and excited by her cook coming into her room in a passion, but did not complain until the following morning, when, at my visit, I was forcibly struck by the state of her weak intermittent pulse. There was no murmur accompanying the heart's action, which was rapid and irregular, or pain or dyspnœa; but there was considerable pain and tenderness over right half of uterus, also some hæmorrhagic discharge of a bright-red colour, which commenced on the previous evening, but did not continue very long. Turpentine fomentations and, afterwards, mustard poultices were applied, which relieved her. Bark and carbonate of ammonia in five-grain doses was given three times a day, with good beef-tea; and perfect quietude was enjoined, considering, from the cardiac symptoms, that thrombosis had taken place.

On the seventh day after her confinement the symptoms were the same; the uterine discharge was of a darker colour, but not offensive. Two-grain doses of quinine, with opium and belladonna, were given every four hours, and three ounces of brandy in the twenty-four hours. The carbonate of ammonia was increased to ten-grain doses every four hours; the outward applications were also continued.

On the eighth day the uterine symptoms were considerably diminished, and the discharge ceased. Morphia was given to procure sufficient sleep.

A consultation with Dr. Robert Lee, who had attended her family, was held at this juncture. He considered the cardiac symptoms to be due to nervousness, and did not attach very serious importance to them, but approved of the treatment. She improved considerably in her general state during the following days, and the intermission in her pulse decreased in frequency. She expressed a great wish to be allowed to sit up in bed, which she did for little while; at this time the intermission was only 1 in 60.

On the fifteenth day after her confinement, she complained of dyspnœa and weight over the region of the heart; its action had become rapid and irregular again, with intermission in the pulse every third beat; there was also increased cardiac dulness towards the right. The bark and ammonia, after being diminished in quantity with the brandy, were increased to the previous doses. The brandy was given every two hours, also quinine. This increase of her symptoms was no doubt brought about by her being allowed to sit up in bed on the previous day. She was again requested to keep the reclining posture for some time to come, and a gradual improvement took place.

In a fortnight after this she was conveyed on a couch to the drawing-room (which is a large, airy one), and enjoined to keep the horizontal posture for some months to come, and the same treatment continued.

On June 23rd her bad symptoms returned. The heart's action became weak and rapid, resembling the fœtal heart. Quinine and sulphate of zinc were given, as well as the bark and ammonia; the opium and belladonna had been omitted some time. She complained of great restlessness and inability to lie in any one position, with a sense of fluttering, and as if the heart's action had stopped. There was a somewhat dusky lividity of face, and distension of external jugulars, and fulness of neck.

Dr. Walshe was called in consultation, and he pronounced it a case of decided intra-cardiac thrombosis of the right heart, manifestly of great danger. There was rapid irregular action of the heart; no murmur; with increased dulness to the right of the sternum; distension of external jugulars; and a spongy tumidness of the base of the neck. She was directed to keep the horizontal posture for several months, and to take the following pills in addition to her former mixture: valerianate of zinc, phosphate of iron, and extract of nux vomica. To have light, nourishing diet, and fresh air from windows. This course was persevered in with success, only interrupted by an attack of hysteria, brought on by a thunderstorm. Menstruation took place, and after several months she was well enough to be removed to St. Leonards, where she improved still more rapidly, and returned home quite restored. She has since given birth to another child, which she went through satisfactorily, and, although rather weak, she maintains tolerably good health, being able to walk about fairly. There is, however, a weakened condition of the heart's action, no murmur being perceptible at the last examination.

Greenwich.

ON THE ENDEMIC BILIOUS FEVER OF THE WEST INDIES, TREATED WITH ELATERIUM.

BY JAMES DENHAM BRADBURN,
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THE fevers peculiar to the West Indies are generally considered as—(1) intermittent; (2) remittent; and (3) yellow fever. There is, however, another which is quite independent of these, yet may be conveniently grouped with Nos. 1 and 2. It is to this I would now call the attention of the profession, and more particularly those of our number who purpose practising in tropical climates, as the disease does not seem to have received the observation which it certainly merits, and will accordingly form the subject of this paper. Yellow fever is a disease so totally removed from the others in its characters that it is needless to discuss it here; and the same may be said of typhus and typhoid, both of which are to be found (the latter commonly), as well as variola, all of which present, so far as my experience is concerned, precisely similar features to those which obtain in Europe.

The fever I allude to may be safely termed the endemic bilious fever of this climate. It is a true fever, running a marked pyrexial course, but quite distinct from either intermittent or remittent fevers, there being no apyrexial interval, and nothing indicative of a periodic type.

People have been so constantly taught to associate malaria with fevers in the tropics that this complaint is always declared to be dependent on it, whereas its true source is not considered, and it receives unsuitable treatment accordingly. This malady is so common in some of the islands that it will be met with in three-fourths of the cases of fever; it occurs in both young and old to an equal extent, and in itself is never fatal.

I shall now proceed to examine the symptoms of this affection. The patient will be found to have a temperature of 105° or more, which does not materially fluctuate so long as the disease lasts, and the pulse will range from 100 to 130 beats per minute. Tongue invariably coated with a white or dirty-white fur, and there may or may not be general jaundice, although the conjunctivæ will, on close examination, be almost always found yellow. In severe cases the prostration is great, and the surface of the body bathed in perspiration; delirium also is sometimes present. On examining the state of the abdominal viscera in typical cases, not the slightest changes will be manifested; respiration hurried; urine almost normal, excepting where there is jaundice, when the usual changes will be noticed. The bowels are always constipated. There is no absolute pain throughout the body, although patients will often refer to a "feeling of heaviness" about the head; indeed, in this region, sharp shooting pains will often be complained of. Such then is the typical state of a patient affected with a fever, which may last from three or four days to as many weeks, although it must be remembered that when the time exceeds ten days complications are to be sought after; for the average duration of an ordinary case is, in my experience,

not more than a week, provided suitable treatment be employed.

Now, it will very probably be inferred by many that a malady whose nature is indicated by such obvious symptoms as those I have described must of necessity be so amenable to treatment that the latter at least can hardly claim any special consideration. There are no marked abdominal lesions, nor is there anything to alarm us with respect to the remaining great cavities. What, then, more simple? I would reply that, after a very careful inquiry into over two hundred well-marked cases, I am convinced that if we proceed to treat the disease heroically (which has long been the fashion)—namely, by terrific purging and *ad libitum* doses of quinine and arsenic, simply because we are in a malarious latitude, we shall merely be sowing future disease of a much more alarming nature, or, which is much the same thing, adding complications which I will refer to later on in this paper; and I would therefore repeat, that we have a bilious fever to consider, if I may so term it, and quite distinct from anything bordering on a periodic type. Others may say we have a simple case of jaundice to deal with, or hepatitis, and that the fever is therefore symptomatic, and nothing more. These I would remind of a constant high, unfluctuating temperature, and an absence of those symptoms which mark true liver affections.

I must here digress for a moment to remind inexperienced observers of a very constant condition of the abdomen which exists amongst children in these parts. I refer to the condition popularly known as "pot-belly." It is exceedingly constant, and the girth of the abdomen, measuring round the umbilicus, is, in many instances, so enormous that dropsy, or some other form of tumour, is most apt to be suspected. It may, however, always be easily diagnosed by the highly tympanitic sound on percussion over the whole region, together with the entire absence of pain, and is, in my opinion, produced through the almost solely amylaceous diet of the lower orders in these islands, the intestines becoming highly distended with gases.

Now, with respect to the *cause* of the disease under consideration, I do not think we need go very far to arrive at this. I am convinced that it is but analogous to the simple continued fever of temperate climates, only here it is *invariably* accompanied by a torpid condition of the chylopoietic system. The jaundice, and, indeed, anything which may be thought to indicate hepatic disease—such as pyrosis and vomiting, which, in my experience, are exceptional symptoms—are, in the affection we are discussing, concomitants of it—in other words, symptoms, not causes; and I am the more confident in asserting this from the large number of cases which I have known to receive no medicinal treatment whatsoever, owing to the refusal of many of the natives of these islands to take our remedies. When not treated at all, a typical case will, as a rule, after a protracted course, get well of itself, just as simple continued fever in Europe will; although, be it remembered, the one as well as the other may subside into something of a more serious nature, not, in my opinion, so much from the fact that they have received no treatment, as that such disbelievers in our art are generally the subjects of all possible carelessness, and court exposure to bad weather, vicissitudes of temperature, pernicious diet, and such-like evils, much more readily than they who have the good sense to call in medical aid when the same can be obtained.

We all know how simple continued fever behaves in Europe, and what more natural than that we should have it so largely here, where the daily temperature throughout the whole year is so favourable for such a condition? It is, indeed, an everyday occurrence here to find men "sick with that fever" (as they term it) one day and out well the next, having merely undergone a feeling of malaise, through, doubtless, a slight increase in their temperature, produced by an extra hot day; and these are they who take quinine largely on the slightest provocation, and blame remittent fever as the source of all their troubles, which in reality are produced by the exhibition of powerful remedies for nothing. I would then insist on the great precautions to be taken in forming our diagnosis of fevers in the West Indies, knowing that an affection of the nature indicated so largely obtains—an affection extremely lowering to the vital powers, but easily remediable,—an affection which, if treated injudiciously, may be still more easily plunged into complications, which, although generally credited with originality, are too often the sequelæ of a most improper and misguided treatment.

Before proceeding to the question of treatment, I think it will not be out of place here to make a few remarks on the prophylactic measures most advisable to be taken against this, as indeed against all tropical fevers. The most important of these is, unquestionably, a judicious selection of residence; and I unhesitatingly recommend an elevation of at least 100 feet above the sea-level, although considerably more if it can be obtained—say 500 to 800 feet. This, too, must be out of the way of all marshy ground, and where there is an abundant supply of fresh water. If, on the other hand, a person's duties confine him to the towns (which generally lie on the sea-coast), the choice of taking a country residence prior to this is, in my opinion, unwise. Better face the enemy at once with all the precautions you can discover; it being a bad plan to seek opposite conditions of temperature, and to go from a very pure into often a very noxious atmosphere in these parts. The disadvantages of the towns are that they are exceedingly hot at certain periods of the year, and, as a rule, have most defective sanitary arrangements, abounding in foul smells day and night. In these cases the most cleanly part of the town must be sought out, with the greatest elevation possible, and the best prophylactic here will certainly prove to be a cold bath early every morning. Nothing can be more invigorating than this. Then the drinking-water must be filtered, and, if ice can be procured, *tant mieux*. People—especially Europeans—living in these latitudes, if they wish to preserve their health, should get up before sunrise, at break of day, and not retire later than three hours after sunset at most. Should the bowels get at all costive, they should be relieved with a little rhubarb and magnesia, or compound senna mixture, although, if attention be paid to the diet, there need not often be any necessity for this. I would advise animal food to be taken once daily only (it is generally taken twice), and the strictest moderation to be observed with respect to stimulants. The latter form the curse of these parts, so far, at least, as good health is concerned. Brandy "cock-tails," "sherry cobblers," "gin slings," rum punch, and a host of other concoctions constitute the leading beverages of the West Indies, and most assuredly very soon breed the leading diseases for which this "dreadful" (?) climate, of course, receives all the blame. A half-bottle of good claret or still hock twice daily is ample for a man (adult) here, and, indeed, forms the best drink; and, provided he will take the same along with his food, I am of firm opinion that he will be infinitely better with than without it. As regards beer and porter (which are very much taken here), I have only to say that, if a person wishes an attack of the bilious fever I have described, he need only drink either of these liquors daily, when he will in more or less time be amply gratified.

And now as to treatment proper. The patient should, firstly, live in a well-aired room. He should lie on a hard hair-mattress, with a mere coverlet over his body. The great fallacy which exists amongst the natives is, that, when sick, the most indispensable thing towards recovery consists in lying in a closed, thoroughly-darkened room, without any ventilation at all; whereas nothing can be more desirable than plenty of light and pure air. Where there are no *jalousies* to a house, sashed windows having been foolishly substituted (as is often the case), the latter should be kept well open at the top, so as to allow of a constant current of fresh air into the room. I have not the slightest hesitation in asserting that it is a great mistake to administer any remedies until the bowels have been freely acted on. And, bearing in mind that the portal circulation is at fault, there are many practitioners who recommend calomel as *the* drug. For children, I believe, this, or grey powder, followed by a good dose of castor oil, to be as good as any, provided they are not given in too large quantities; but for adults nothing has answered so well in my hands as *elaterium*. This should be given in pill, quarter to half a grain, along with half a grain of the extract of belladonna to prevent its griping. It is too depressing for children. To be effective, a good and reliable preparation must be ensured, and for this the local dispensaries must not be trusted to, as all powders and extracts deteriorate immensely as soon as they reach this climate. This is easily obviated by having the pills made in Europe, and covered with a firm coating. I had some prepared for me by Messrs. H. and T. Kirby, of London, and they answered all the requirements, having an excellent innocuous coating, thus protecting the pill mass, and securing a most reliable drug, which it would be impossible otherwise to obtain in these hot climates. As to

whether this drug has any specific action on the liver, I am unprepared to assert, but I have obtained such excellent results from its employment in these cases that I can confidently suggest its having some analogy to podophyllin therapeutically. Where the head symptoms predominate (as they often do), elaterium acts as an admirable derivative, and it may be most judiciously combined with a blister to the nape of the neck should delirium be present. When the secretions have been put to rights, diuretics act best, and a mixture containing sweet spirits of nitre and potash, with or without small doses of squill, will prove very useful. The diet of the patient must on no account be neglected—beef-soups and milk, with some starchy food, are the best. Unless the prostration be great, stimulants are not needed; but if required, half an ounce to one ounce of good brandy, containing one drachm of spirits of ether, thrice daily, will generally be found sufficient. Should the fever not give way soon to this treatment, and should the subject of it be living in an unhealthy district, more especially a hot village on the coast, immediate removal to the hills must be insisted on, which will, in most cases, be found to work a speedily happy change.

And, lastly, as the disease has a very lowering action on the system at large, during convalescence, tonics, with a good nourishing diet, should be exhibited; and of the former nothing can possibly be better than iron and small doses of quinine, combined, if thought desirable, with nux vomica.

Although this bilious fever is such a simple affection, yet it must not be forgotten that it very frequently partakes of a periodic type; in fact, it may be said then to merge into remittent fever. And when it does this, from my own observations, the intermissions occur most commonly during the day, with a well-marked hot stage towards evening. Quinine should be administered in these cases during the interval, and one sharp dose of ten to fifteen grains is in every way preferable to repeated smaller doses. Such a result is most likely to occur to those who have been injudiciously treated, or not treated at all, on their first complaining, and more especially, of course, if these should be residing in one of the unhealthy coast-towns previously referred to, or in a district where miasmata abound.

Where indiscriminate purging with large doses of croton oil and the like has been practised I have known a most obstinate dysentery more than once set up; and it matters not whether such a complication arises from this cause, or occurs subsequently (as it may do) without our being able to assign any tenable reason for its appearance, it is certainly much to be dreaded. In weakly subjects, at least, such an event is pretty sure to prove fatal. In these cases a milk diet must be adhered to, and Liebig's extract of beef will be found a most useful adjunct. Patients can sometimes retain this when all other aliments have been ejected. These remedies must be exhibited according to the nature of the alvine discharges. I cannot, however, too strongly state my belief that enemata should never be lost sight of, because they often do much towards effecting a diminution in the number of evacuations, and save an already enfeebled stomach from taking medicine, when very often even food of any description cannot be retained. They should, of course, be suitably medicated, and the extract of beef may often be advantageously combined. We come, lastly, to the question of pyrosis, with vomiting, which, although occurring pretty often, do not sufficiently so to be classed as typical along with other symptoms of this fever. To allay these small lumps of ice may be freely sucked, and, should this fail, hydrocyanic acid, with bismuth, will make amends for it.

In conclusion, I would remark that we have been considering a fever—the simplest that is to be found here, just as simple continued fever is in Europe—which may be easily remedied, which may subside into remittent fever, or which may meet with other complications. In itself it is quite distinct from any other affection, and I close my paper by enumerating the West Indian fevers, at least as far as my observations are concerned, thus:—(1) Bilious fever; (2) Remittent fever; (3) Intermittent fever; (4) Yellow fever. The first is by far the most common, and also the simplest, provided that the place be free from malarious influences; then, in order of frequency, comes the second; and then the third. Remittent and intermittent fevers occur, in my opinion, very much more seldom than is generally supposed, simply through the endemic bilious fever of these latitudes not receiving proper recognition as an independent affection.

Trinidad.

ABSTRACT OF

NOTES OF A CASE OF RAILWAY INJURY,

WITH OBSERVATIONS OF SURFACE TEMPERATURE.[1]

BY ROBERT W. FORREST, M.D.

W. R. W——, aged twenty-four, on August 1st of last year was riding in a train having goods waggons in front and passenger carriages behind, when a considerable part of it was wrecked, including the carriage in which he was travelling, from the giving way of an axle of one of the waggons in front. The carriage in which he rode was dragged on its beams over a broken bridge, then, from the couplings giving way, it suddenly came to a stand, and at length rested on a pile of wheels and axles. When the accident happened the train was running at between twenty-five and thirty miles an hour. Mr. W—— was sitting with his face to the engine and in the act of stooping to pick up a newspaper from the seat opposite, when he was suddenly thrown forward, then jerked backward, striking his back violently on the uncushioned partition of the carriage; he recollects nothing further till he found himself standing at the foot of the embankment, feeling greatly shaken, and suffering from pain in the left breast. He was unable to take food when he got home some hours later; he was sleepless and excited all night, and stiff and sore next day. Thinking that rest for a few days would set him right, he remained at home till the 11th, when business compelled him to return to Glasgow.

He called on me for the first time on the 13th, when he complained of pain at the lower part of the back, which he had felt for the first time four or five days after the accident. I found great tenderness on pressure over the lower lumbar vertebræ; also considerable tenderness on pressure over the middle and lower dorsal vertebræ. Patient complained also of being unable to get through his ordinary duties without great effort. A month after the accident (viz., beginning of September) he spoke of his right leg feeling stiff. Two months later (beginning of November), pain in the right leg was complained of; and he was now, from pain and weakness in the back, unable to sit except bolt upright. He now for the first time spoke of a feeling of numbness of the ring and little fingers of the left hand, which felt colder to the touch and moister than the corresponding parts of the right hand, the numbness and coldness extending to the elbow along the ulnar side of the arm. Coldness and want of feeling of the right leg from the knee downwards was also complained of.

After a consultation with Dr. Fergus, observations with Mortimer-Granville's surface thermometer were begun in the middle of December; the first of those noted below being made on December 24th and the last on January 6th. On the 8th January the following note of his condition was made:—"The little finger and ulnar half of ring finger of the left hand are markedly insensible to the faradaic current; the tactile sense, however, seems unimpaired. The skin of the right leg is markedly anæsthetic below the knee, as manifested by the faradaic current, by touch, by pulling hairs, and by the compasses. The excitability of the muscles is apparently not affected; their sensibility during contraction is quite different in the two limbs; no apparent atrophy. Patient is unable to raise himself from the sitting and the lying posture without the assistance of some fixed object. The movements of the right foot are performed slowly, sluggishly, and incompletely; in walking, the right foot is not used freely; in all his movements he keeps the spine rigid. He does not shrink on light touching, but complains very much of pain on pressure being made over the upper, middle, and lower part of the vertebral column."

[In using the thermometer, owing to the bulb containing a large quantity of mercury, a considerable time elapses before the true temperature is reached, so that the first observation requires a period very much longer than the succeeding ones; about five minutes being found to suffice for them, if the instrument is rapidly transferred from one place to another, so as to prevent the apparatus from cooling. The

[1] Read at a meeting of the Glasgow Southern Medical Society, on May 30th, 1878.

degree of force with which the apparatus presses on the skin requires also to be carefully attended to. For explanation of the thermometer, and fallacies to avoid in using it, see description by Dr. Ringer in THE LANCET of Aug. 11th, 1877.]

At the time the following observations were made the patient was wholly confined to bed, and covered with the bedclothes except while the index was being read.

Surface temperature taken an inch and a half below outer condyle of femur; thermometer applied at 11.30 A.M.

	Right (affected) leg.	Left leg.
At 6 P.M., after 6½ hours' application, it stood at	91·8°	—
At 6.10 P.M. it stood at	91·6°	—
At 6.15 P.M., after five minutes' application on left leg, it rose to	—	93·2°
At 6.20 P.M., after five minutes, back to right leg, it had fallen to	91·6°	—

Surface temperature taken on patellæ; thermometer applied at 12.30 P.M.

	Right (affected) leg.	Left leg.
At 2.50 P.M., after 2 h. 20 m. application, it stood at	87·2°	—
At 3 P.M., after ten minutes on left leg, it rose to	—	88·8°
At 3.10 P.M., after ten minutes, back to right leg, it had fallen to	86·2°	—

Temperature of air under bedclothes, 78°; in axilla, 98·2°.

Surface temperature taken on patellæ; thermometer applied at 4.10 P.M.

	Right (affected) leg.	Left leg.
At 7.45 P.M., after 3 h. 35 m. application, it stood at	—	89·8°
At 7.55 P.M. it stood at	—	90°
It was then applied to right leg, and at 8.7 P.M. found to have slipped off the limb; it was reapplied, and		
At 8.17 P.M. it recorded on the right leg	86·6°	—
At 8.27 P.M. it stood at	86·8°	—
At 8.37 P.M. it stood at	86·6°	—
At 8.49 P.M., after 12 m. on left leg, it rose to	—	90·6°
At 9 P.M., after 11 m., back to right leg, it had fallen to	86·4°	—

Temperature of air under bedclothes, 83°; of room, 64°; in left and right axillæ, 98°; in mouth, 98·4°.

Surface temperature taken on patellæ; thermometer applied at 6.30 P.M.

	Right (affected) leg.	Left leg.
At 9.20 P.M., after 2 h. 50 m. application, it stood at	88°	—
At 9.30 P.M., after 12 m. on left leg, it rose to	—	90·2°
At 9.52 P.M. it rose to	—	90·4°
At 10 P.M. it rose to	—	90·6°
At 10.8 P.M. it remained at	—	90·6°
At 10.22 P.M., after 14 m. on right leg, it had fallen to	87·4°	—

Temperature of air under bedclothes, 75°; of room, 61°; in right and left axillæ, 98·8°; in mouth, 99°.

Glasgow.

A CASE OF GRAVES'S DISEASE.

BY W. B. SEALY, M.R.C.S. &c.

HAVING seen in THE LANCET of the 2nd March last an account of a case of "Exophthalmic Goitre and Diabetes occurring in the same Person," by Dr. O'Neill, of Lincoln, I beg to send a short account of a case of mine recently under treatment.

Mrs. ——, aged thirty-two, of a dark sallow complexion and rather a mottled appearance, called me in to see her on Jan. 7th of this year. She was suffering from "large eyes and a great lump in her throat," as she described it, and which she said had been coming on for fifteen months. I at once perceived that the patient presented the usual symptoms of exophthalmic goitre, or Graves's disease. Both eyes were much protruded (the left more so than the right), the lids could not meet, and the eyeballs were large, bright, and glistening, which made her look "rather fierce." The thyroid gland was much enlarged and of a hard, tense, elastic consistence; in addition, the left and middle lobe were more enlarged than the right. She suffered occasionally from slight palpitation of the heart, with some pain. A systolic bruit could be heard over the precordial region, the pulse ranged from 110 to 120 when first I saw her, and for many months she had also suffered from amenorrhœa. She gradually improved under a treatment of digitalis, iron, and belladonna, varied with aconite and conium. The pulse fell to 100, the eyeballs decreased in size, the thyroid body became smaller and less tense, and her other symptoms improved in proportion.

I must confess I was not aware of any connexion between diabetes and Graves's disease until I read Dr. O'Neill's very interesting account in THE LANCET of the two diseases occurring at the same time in the same person, and although my patient had no constitutional symptoms of diabetes, I nevertheless at once examined the urine, and found it of low specific gravity, and containing no sugar. This is an additional case in proof that diabetes and Graves's disease do not so frequently occur together as some appear to suppose.

Brant Broughton, Newark.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

ABSCESS POINTING AT THE GROIN, OCCASIONED BY CANCER OF DUODENUM; REMARKS.

(Under the care of Mr. HULKE.)

A VAN-DRIVER, aged twenty-seven, who had been first admitted into a medical ward 27th March, 1876, was transferred on June 6th to Forbes's ward, his condition having assumed a surgical aspect. He had at this time a deeply-seated swelling, very tender and painful, non-fluctuating, dull on percussion above the crease of the right groin, reaching from the anterior superior iliac spine nearly to the spine of the pubis, and dipping above into the iliac fossa. He kept the right thigh flexed on the trunk at an angle of 45°, and any attempt to extend it caused very great suffering; and he lay always on the right side. His temperature was high, pulse quick, and his appetite small. At the beginning of his illness in the spring, the most prominent symptoms were pain in the belly and vomiting, and the swelling had only been noticed in the beginning of June.

June 12th (four days later).—Pulse 106; temperature 102·6° F.; the swelling not quite so hard, and there was slight œdema over it. A large quantity of thin brownish pus, having an extremely fetid, fæcal smell, was let out. The cavity of the abscess was washed out with a solution of carbolic acid, and the opening was dressed antiseptically. Next day his pulse was 84, and temperature 98·4°. He felt much relieved. This improvement was only transitory. Obstinate diarrhœa set in, his appetite became very capricious, and he occasionally vomited; he lost flesh and strength, and died on Sept. 20th following.

At the examination of the body the abscess was traced upwards along the psoas muscle to the duodenum, the second part of which was lost in a cancerous mass, centrally soft and broken down into a large sloughy cavity continuous with the lumen of the bowel.

Remarks by Mr. HULKE.—In this case the great distance of its source from where the abscess pointed, led to its origin being overlooked. The relative immunity of the male sex from abscesses beginning within the pelvis, the exclusion of

coxitis by the freedom from pain in the hip-joint upon such movements of the thigh as did not stretch the ilio-psoas muscle, by the posture—great flexion of thigh without adduction,—and by his habit of lying on the right side, and the improbability of spondylitis inferred from the absence of any distinct local signs of this, led in this case to the diagnosis of abscess beginning in the iliac fossa—an opinion in harmony with the first symptoms of his illness, and apparently confirmed by the character of the pus evacuated.

GLOUCESTER COUNTY ASYLUM.

CASE OF POISONING BY CARBOLIC ACID.

FOR the following notes we are indebted to Mr. W. Herbert Packer, assistant medical officer.

The patient, a female aged twenty-nine, was originally admitted into the asylum on May 19th, 1865, suffering from epileptic mania. She was of very intemperate habits, drinking greedily anything that came in her way, but certainly having no suicidal tendencies. One day the unfortunate patient approached stealthily to a table where the nurse had temporarily placed a bottle of carbolic acid, seized it, and drank it off before she could be prevented. The medical officers were at once summoned, and saw her within five minutes of the occurrence. She was then in a state of collapse, pale and cold, with clammy perspiration on the forehead. The radial pulse was about 112, and scarcely distinguishable; the conjunctiva was insensible to touch, and the pupils were dilated and immovable; respiratory movements almost imperceptible, about 56 per minute; froth exuded from the nostrils. The breath smelt strongly of carbolic acid, and marks of corrosion were seen on either side of the upper lip. She was immediately put on a bed close at hand, and olive oil poured down her throat from a spoon at first, but afterwards thrown direct into her stomach by the stomach-pump. A solution of carbonate of soda was also injected, and the stomach emptied. The breathing nevertheless became stertorous, and the cardiac movements weaker and intermittent; the pupils contracted somewhat, the face at the same time assuming a more livid hue. Brandy was administered per rectum, and, mixed with milk, through the tube into the stomach, sinapisms also being applied to the legs, &c. In spite of what was done, she died in about forty-five minutes, never having shown the slightest sign of reaction.

Necropsy, twenty-four hours after death.—Weather fine and mild. Rigor mortis strongly marked; body well nourished and muscular, dependent parts congested. The skin was corroded in a line about half an inch long, running upwards and outwards from either angle of the mouth; a frothy fluid exuded from the slightly inflamed nostrils. The blood generally was fluid, and smelt strongly of carbolic acid. The cut vessels bled freely. The scalp was thick, and the skull also was thick and dense, and had scarcely any diploe. Brain-substance firm, sections smelt strongly of carbolic acid; ventricles full of serous fluid, in which the odour of carbolic was particularly marked. Vessels full of fluid blood.—Respiratory tract: No œdema of glottis; trachea in a state of acute inflammatory congestion, containing a few particles of food, too few and too small, however, to have seriously impeded respiration.—Lungs congested, smelt strongly of carbolic; several small hæmorrhages under the pleura; bronchial tubes down to those a quarter of an inch in diameter much congested.—Heart pale and flabby, contained fluid blood in all its cavities.—Alimentary tract: Mouth and tongue blanched, circumvallate papillæ of latter swollen.—Œsophagus: Mucous membrane whitened and rough throughout; epithelium seemed replaced by a dry, grey, false membrane: this could with difficulty be stripped off, leaving a red and congested surface.—Stomach: Cardiac end reddened, and in a state of acute inflammatory congestion, but mucous membrane soft and smooth. The rest of the organ seemed healthy; contained about half a pint of apparently semi-coagulated milk.—Liver pale, and also smelt strongly; much blood exuded from cut vessels on section.—Kidneys blanched, and capsule stripped off easily; smelt strongly.—The bladder contained four ounces of urine, smelling strongly of carbolic acid, but otherwise apparently normal.

The microscope showed no fatty or other abnormal change to have occurred in the various tissues and organs.

On inquiry the acid taken was found to have been about half an ounce, and of that variety known as crude or commercial carbolic acid.

The comparatively small amount of damage inflicted on the glottis and stomach is worthy of consideration in connexion with what is generally stated to be the case.

PROVINCIAL HOSPITAL, PORT ELIZABETH.

ANEURISM OF THE AORTA OCCURRING IN HUSBAND AND WIFE—OF THE ARCH IN THE FORMER, OF THE THORACIC AORTA IN LATTER; DIFFICULTIES OF DIAGNOSIS.

(Under the care of Mr. FREDERICK ENSOR.)

A WOMAN, aged forty-seven, married twenty years, had four children, and had been in the colony eighteen years, was admitted August 24th, 1875. Fourteen years before she had rheumatic fever; never had blister on the chest, but had occasionally pain in the joints during damp weather. She considered herself healthy, and led an active life until three years before admission, when her husband became ill, and eventually succumbed to aneurism of the aorta, involving the left common carotid. She herself then gradually got ill with cough and bronchitis, aggravated at times. She considered she had asthma. For the six months previous to admission her cough had been worse, and she suffered extremely from dyspnœa, more like bad asthma than anything else. She had been in the hospital during the previous time with an attack, when it was noticed that the left arm and hand were swelled. She left the hospital relieved, but returned in about a month with an attack of dyspnœa, which was relieved by tincture of belladonna, six drops, with morphia and decoction of senega.

She was rather below middle height, sallow complexion, had grey eyes and brown hair. The veins were conspicuous over the chest; the left arm looked larger than the right. Right radial pulse was more distinct than the left. Right front of chest expanded a little more than left. Right subclavicular region gave a clear note on percussion, but the note was duller lower down. The left subclavicular region was clear. Loud rhonchi were heard over both lungs, front and back. Percussion dull over both lungs posteriorly, more marked over left upper third. Heart-sounds distant, probably from emphysema of lung, more distinct at upper part of sternum; a slight impulse (?) The diagnosis was chronic bronchitis, with emphysema, accompanied by a tumour pressing on large venous trunks, probably an aneurism, about the origin of the left subclavian artery.

The weather was stormy and cold during the first half of September, and on the 16th of that month the dyspnœa had increased very much. Air entered the left lung very feebly, if at all; the veins were more distinct over the chest. The heart's action was heaving and the impulse increased. There was pain in the side and between the shoulders.

On Oct. 4th the dyspnœa was worse, and was unrelieved by medicines. The left arm and hand were more swollen. The easiest position was lying on her right side, in a half-sitting posture. When she was raised and the body inclined backwards, dyspnœa was extreme; she looked as if she would die. Percussion dull all over the left lung behind, slightly resonant in the subclavicular region; diminished clearness both front and back of right lung. The heart's action was irregular and heaving; no bruits. No solid food had been swallowed for several weeks. On Oct. 6th she died, in great distress from dyspnœa.

Necropsy.—Body not at all emaciated. Skin clear; no marks of syphilis or any skin disease. Hair dark-brown, not at all grey. Excess of fluid in the pericardium. Heart of average size; no marks of pericarditis. Right lung crepitant, congested, adherent by old bands to the chest wall. Left lung two-thirds impervious to air; nearly the whole of it adherent to the chest wall, requiring force to tear it away; the lower third quite leathery on section, and compressed. On detaching the left lung from the chest wall and pulling it over to the right, it was discovered that nearly the whole of the thoracic aorta was converted into an ovoid aneurismal sac, which had eroded several of the vertebræ and completely obstructed the root of the lung, and had pressed that organ against the chest wall. The interior of the aorta was smooth; no calcareous deposits. Other organs not examined, time being limited.

The diagnosis in this case was one of great difficulty. The

earlier symptoms pointed to merely bronchial congestion and spasm. There was no bruit; no enlarged area of dulness; no evidence of degeneration of arteries, as expressed in the skin of the face or rigidity of superficial vessels, radials, &c. No history of alcoholism. The only trouble was that of general pains, increased by damp weather; these pains, taken with the fact of confessed syphilis in the husband, were considered also to be an effect of a similar taint. There was a history of several miscarriages. It was not until the laryngeal stridor and difficulty of swallowing supervened that the idea of a tumour suggested itself to the mind. It was difficult to surmise the nature of the tumour. The woman had not a cancerous physiognomy, nor was there a history of inherited cancer. The sputa gave no evidence. There was no evidence of tubercle at all; no emaciation; no symptoms of tubercular glands. By a process of elimination the diagnosis of aneurism was come to, but it seemed so improbable that husband and wife should be carried off by aneurism.

It may be well to mention that the husband was attended for many months for supposed aneurism occupying the situation of the left subclavian and carotid. This diagnosis was confirmed by post-mortem examination. In his case alcoholism had a great share, although, there also, no calcareous deposits were seen. The evidence of syphilis was undoubted, as shown by pains in the bones, nodes, headache, &c. The woman's case shows the difficulty that may attend on the diagnosis of thoracic aneurism, especially in the earlier stage. Pains in the centre of the back and in the lines of the intercostals seem to be the most marked symptoms of an aneurismal tumour pressing on the vertebræ and irritating the nerves which branch from the spine. These two histories show, moreover, how large a part syphilis plays in the production of those changes of arteries which result in aneurism.

Reviews and Notices of Books.

The Journal of Physiology. Edited by MICHAEL FOSTER, with the co-operation of Profs. GAMGEE, RUTHERFORD, SANDERSON, BOWDITCH, MARTIN, and WOOD. Vol. I., Nos. 4 and 5. Macmillan and Co. Sept. 1878.

PROFESSOR FOSTER is to be congratulated on the success of the undertaking he has with such strong co-operation ventured upon. Each part of this journal has been an improvement on the last, and the numerous and valuable contributions which enrich the present number constitute sufficient evidence that there is a large amount of what may be called "latent energy" in the country, needing only a little pressure to bring it forth. We would earnestly press on all those who are interested in the progress of scientific research, who are desirous that physiology in England should not become extinct, and that we should not draw all our knowledge from foreign sources, to assist Professor Foster in his praiseworthy effort. The cost of the journal is moderate, especially when the large amount of original matter it contains, and the plates by which it is illustrated, are taken into consideration; and as we can confidently state there is no desire on the part of the editor to make money out of the journal, the larger its circulation the more numerous and fuller will be the contributions, and the more thoroughly will it represent the British school of physiology, which, if it continue as it has begun, will soon exert a powerful influence on the practice of medicine.

The first three papers are by Dr. Sydney Ringer and Dr. Murrell, on the Action of Arseniate of Soda, Arsenious Acid, Aconitia, Tartar Emetic, Hydrocyanic Acid, and Veratria on the Animal Body. They find that some differences exist in the action of arsenious acid and arseniate of soda, the former exerting its poisonous action much more rapidly than the latter. Both, however, act as poisons upon the central nervous system, paralysing its activity, whilst they have no action on the heart. Arsenious acid is further shown to be a muscle poison, destroying alike, though only after the lapse of some time, both the conductivity of the motor nerves and muscular irritability. A curious point is noted—namely, that in the course of a few hours it causes separation of the cuticle of the whole body in the frog. They conclude from these experiments that arsenious acid is a poison to all nitrogenous tissues, though they are unable to state in what way it acts. Aconitia, like arsenic, is a protoplasmic poison, and acts by paralysing the vagi and all nervous tissues connected with the heart, as well as the muscular tissue itself. Tartar emetic paralyses the central nervous system, the sensory and motor nerves, and the muscles; it may, therefore, be also included in the group of protoplasmic poisons. In regard to veratria, they have obtained no evidence to prove that it acts on the central nervous system, though it paralyses motor and sensory nerves and the heart.

Mr. Dowdeswell describes the structural changes produced in the liver under the influence of the salts of vanadium.

The next paper, by Mr. Gaskell, on the Vaso-motor Nerves of ordinary Muscles, is of much interest. He shows that the flow of blood through vessels is regulated by both constricting and dilating muscular fibres, each set having its own supply of nerves; those supplying the dilator fibres being the most important, and resembling, to some extent, in the vigour and significance of their action, the nervi erigentes of the penis or the fibres contained in the trunk of the chorda tympani. The nerves for both the dilator and constrictor muscles run in the nerve distributed to the muscle; those for the constrictor fibres proceed from the sympathetic abdominal trunk, which, when divided, permits the dilator fibres to act, causing an immediate increase in the flow of blood through the muscle, whilst the administration of curara paralyses the dilator fibres, yet does not cause much constriction of the vessels on account of the feeble development or power of the constrictor nerve-fibres. Another conclusion that follows from Mr. Gaskell's experiments is that the activity of muscles, however caused, is accompanied by an increased flow of blood through them, which has an important bearing on the cause of those variations of blood-pressure that follow stimulation of an afferent nerve, though no contraction may be produced.

Mr. G. L. Walton supplies evidence, in his paper on the Function of the Epiglottis, that it is of little importance in deglutition, but that it materially affects phonation. Mr. Sewall describes the development and regeneration of the gastric glandular epithelium, during fœtal life and after birth. Drs. Stirling and Skinner give an account of the Epithelium of the Cornea. Mr. Langley continues his researches on the Physiology of the Salivary Secretion, the present article bearing on the mutual antagonism of atropine and pilocarpine in the case of the cat, and containing the results of a large number of experiments requiring much skill in their performance. Dr. Martin and Dr. Booker show the influence of Stimulation on the Mid-brain upon the respiratory rhythm of the mammal, and demonstrate by their research the presence of a respiratory centre deeply situated in the mid-brain of the rabbit, stimulation of which causes acceleration of the respiratory acts. Drs. Ringer and Murrell contribute a paper on Pituri; and the last two articles are by Kronecker and Stirling, on the Genesis of Tetanus, and on Initial Contraction.

On the Photo-Chemistry of the Retina, and on the Visual Purple. Translated from the German of Dr. W. KÜHNE. Edited, with Notes, by MICHAEL FOSTER, M.D., F.R.S. pp. 104. London: Macmillan and Co. 1878.

IT was only a few months ago that the profession, as well as the public, were startled with the announcement that a German professor had been successful in obtaining and fixing impressions made on the eyes of animals before death—a result that, it was supposed, might be made available in

medico-legal investigations. The statement, like other sensational paragraphs, expressed with much exaggeration a truth. The essay before us contains the entire history of the interesting researches made by the author on the colour of the retina. The fact that the retina has a proper colour of its own was first clearly laid down by Professor Boll, but had been partially recognised by several observers previously. Thus Krohn, as long ago as 1839, stated that the retinal rods of Cephalopoda were of a red colour; and Heinrich Müller, in 1851, more than suspected the rods were red in the Vertebrata; whilst Leydig, in 1857, wrote that the fresh retina of frogs was of a lively, satiny red. In fact, as Kühne observes, "whoever has busied himself with the retina will be reminded by Boll's discovery (and thereby receive a wholesome admonition of the limits of his own ability) that he has already seen something of the kind before. He will perhaps remember that puzzling blood-clot, which at one moment he saw, or thought he saw, under the retina, and which the next moment disappeared. What he then passed over so lightly was nothing less than the key of the secret how a nerve can be excited by light. In other words, it was the first fact disclosing the existence of photo-chemical processes in the retina."

At first Kühne, with others, thought that great haste was requisite in the removal of the retina from the body, but he soon found that the "visual purple," as he names it, remained unaltered for a long period—indeed, almost till decomposition set in,—providing it was kept in the dark, or was only exposed to the monochromatic light of a sodium flame.

Kühne gives in detail the various experiments he made to ascertain the best means of preserving the colour of the retina, and those which led him to discover that, although the retina rapidly bleaches after death when exposed to light, it retains its lively colour in the living body, even on exposure to the brightest light, as long as it is in contact with the choroid. The colouring matter appears to be limited to the rods and essentially to their outer segments, and it must not be confounded with the oil-drops found in the outer extremity of the cornea of many animals. Kühne finds that it is absent in the bat and most intense in the eel. It is less abundant near the yellow spot in monkeys than in other parts, if it be not altogether absent. It is developed before birth. It is soluble in bile. By placing a row of retinæ from the frog in different parts of the solar spectrum, Kühne found that, of all kinds of monochromatic light, greenish-yellow acted with the greatest energy as a bleaching agent, and red with the least rapidity.

The details of his optographic experiments possess much interest, but are now tolerably familiar to our readers. He shows it is not difficult to obtain accurate photographic impressions on the retina by a suitable method of exposure, and by subsequent treatment with alum they can be for some time rendered permanent.

We cannot terminate this notice without saying a word in praise of the translation, which is excellent throughout, furnishing no evidence in its clear and idiomatic English of the difficulties of the original.

Clinical Work: a Quarterly Journal of Therapeutics and Public Health. Edited by ANDREW DAVIDSON, F.R.C.P. Edin. Port Louis, Mauritius.

WE have no little pleasure in calling attention to an attempt to establish in Mauritius a colonial journal with a view to encourage accurate medical observation, and of which we have recently received the first numbers. As able men with European training settle down or are stationed in our colonies, the desire arises in them to grapple with the vast mass of unutilised material around, and the need then shows itself for an easy medium of communication and record. The protean forms of malarial fever meet the practitioner at every turn in the Mauritius, and constitute the most important cause of death, besides modifying in some measure a great number of other diseases. The editor therefore starts the journal with an able sketch of this malady, as it is met with in that part of the world, and follows it up in the second and third numbers by a critical notice of Professor Hertz's article in Ziemssen's Cyclopædia, which ought to be useful to colonial men. Another matter considered is the treatment of the pest, which is becoming a pressing question in malarial regions, owing to the gradual clearing out of the vast South American chinchona forests, the diminution in the supply of quinine, and consequent rise in the price of the drug. The substitution of tannin, chinchonidine, and quinetum are considered in these numbers by Drs. Monty and Pellereau, and the report of the Commission appointed in the Madras Presidency in 1867-68 to consider the therapeutical value of the chinchona alkaloids is also given. Another subject closely allied to the foregoing is a review by Dr. Pellereau of an important work by Dr. Mazaé Azéma, of the Isle of Réunion, on the Diseases of the Lymphatic System endemic in Hot Climates. After malarial fever dysentery forms the most frequent cause of death in Mauritius, and the journal contains an interesting article on this disease. Tetanus is exceedingly frequent, and supervenes in numerous cases of trifling injuries and operations, and the reader will find in the July number the commencement of a series of practical papers on this subject by various physicians. The editor announces his intention of devoting especial attention to the subject of Leprosy, and especially the earlier stages of it; and we have as a first instalment the notes of two cases by Dr. Pellereau. Lastly, there are other articles and cases illustrating medico-legal matters. We trust the practitioners of Madagascar, Réunion, and other islands, will heartily co-operate, and make the journal a success.

PROVINCIAL INTRODUCTORY ADDRESSES.

QUEEN'S COLLEGE, BIRMINGHAM.

MR. WILLIAM THOMAS commenced by defending the custom of introductory lectures; they were convenient opportunities for annual meetings of those interested in the prosperity of the school; for the assembling of the students for the distribution of class prizes, whilst they conjured up agreeable recollections and old associations in those whose connexion with their *alma mater* had long ceased. He spoke of the numerous topics which had been treated of on such occasions, and stated his intention of noticing some points in the life history of the medical student—the causes which contribute to his success or occasion his failure. He first alluded to the old system of apprenticeship, which from the rough and ready knowledge it taught of the symptoms and treatment of disease, often spoiled the student, and made him regard the study of scientific medicine as a useless imposition. It had, however, some advantages; it made practical men not easily turned from their opinions by new and theoretical ideas. The pupil knew who was his teacher—sometimes a difficult matter at the present day,—and the teaching was sometimes of a superior kind. The student of former years thus entered a medical school with some knowledge of his profession. He came to study anatomy, to attend certain courses of lectures, to watch the practice of distinguished physicians or surgeons. He was a spectator of what was going on in the hospital rather than an active co-operator in its work. The valuable posts now offered as prizes to the best students had to be purchased or obtained by influence.

All this was now altered. Apprenticeships had become a relic of the past, and the youth passed from school direct to the dissecting-room and the hospital-ward. More was required of the medical practitioner than formerly; important advances had been made; our science had become more positive, its practice in well-trained hands more certain; the general education of the public had been improved; means

for teaching physiology and the laws of health existed. Truly the times were changed, and it behoved everyone interested in the progress of our art to see that medical education should bear some ratio to the altered conditions. He stated that few students had any very definite aim beyond obtaining a respectable qualification as soon as possible, and that usually the minimum rather than the maximum qualification was sought. Various reasons were given for this, which would continue to be the case until a considerable reform took place in the curriculum of the student, and in the ability of the public to judge of such matters.

It was important that the student at the first should be satisfied as to his competence to undertake the responsibilities of medical life. There was LO mystery in medicine beyond the range of a mind of average ability and industry. The aspirant for our profession should have a good general education, a taste for the physical sciences, a logical mind, a retentive memory, manipulative dexterity, and, above all, a kind and sympathising heart, which never loses sight of the fact that patients are human beings, not merely anatomical entities.

One of the most frequent causes of failure was want of definite aim in his work. The student was strongly recommended to postpone his hospital attendance until he had passed his primary examination in Anatomy and Physiology. He would understand disease more quickly. Incompetent men would be weeded out; dissectors could not act as dressers, and various advantages of division of labour would be obtained.

The second or clinical part of his work introduced the student to the hospital. He ought to strive while there to see all he could, hear all he could, and do all he could. No man's medical education was complete who had not done his share of dressing, case-taking, and special charge of patients in a hospital, however diligently he might have attended clinical lectures or walked through the wards. As the student increased his knowledge, and became more conversant with the circumstances and conditions which influence disease, he would find that medical knowledge had attained a high position, and, as far as questions of diagnosis and prognosis are concerned, might fairly take rank with what are usually considered more exact sciences.

The lecturer then addressed a few words of advice to the students, whom he recommended to work hard, and not to forget to test their progress frequently. Intervals of relaxation were necessary; football and cricket formed an admirable antidote to brain fatigue. He concluded by reminding those who had recently qualified that the true physician or surgeon is always a student eager and anxious to advance his science for the benefit of mankind.

LEEDS SCHOOL OF MEDICINE.

THE President for the year, Dr. J. L. EDDISON, discussed the three questions of the day—Vivisection, the Abuse of Alcohol, and Vaccination—concluding as follows:—"Either an unvaccinated child is in a condition dangerous to itself and to its neighbours, or it is not. If it is, by all means let it be vaccinated; but to admit the danger and then to expose the child and the public to all the consequent risk, if only the parents or the Anti-Vaccination Society will pay five shillings, is neither just nor reasonable. The real anti-vaccinator, with his sublime indifference to evidence, is quite refreshing compared to these persons. It is difficult to understand how they have come to join their forces together; for, after all, their proposition comes to this, that it is quite a proper thing to fine every man who does not like vaccination, but you must only fine him five shillings for each child. Of course a man who really cared about it would not give way for five shillings; so it would end in fining a number of decent, if misguided, people in small sums of money, and the children after all would remain unvaccinated. It may strike you as remarkable that our profession should, in the face of so much opposition, be continually striving to prevent disease; for it appears to be, and perhaps is, so decidedly against our pecuniary interest. But interest of that kind has never guided the profession, and I believe it never will. From *The Times* of a few days ago you might have taken a good example of how little reward some members of the profession receive even when their efforts are most successful. The Surgeon-General to the Forces (Dr. Maclean) writes to tell the English public that Dr. Carl Warburg, who, in his opinion, devised the best preparation known for the treatment of the most fatal kinds of malarial fever, and who gave the formula to the public, is at this moment in want of the very necessaries of life. Dr. Warburg, it appears, 'hoped that the Government would reward him.' Perhaps if, instead of saving human life and suffering, he had devoted his energies to the invention of some instrument of death and destruction—some torpedo, say, something that would inflict more dreadful injuries than anything now known, something that would carry more of his fellow-creatures suddenly into the next world at the least possible cost—then, indeed, he might have been sure of a good grant, a pension perhaps, and a certain income from every Christian Government under the sun. But if it is not likely that you will acquire great wealth you may, at any rate, expect to make a fair living, and happily neither wealth nor social distinction are by any means necessary for the thorough enjoyment of life. If, however, they are your chief objects, I think you would do well to hesitate before it is too late. But if other and better things than these will content you, and if you are willing to carry out your work fairly and conscientiously, you need not regret your choice of a profession. Those who have gone before us have raised our art to the position it now holds. It is for you to remember how great an inheritance is left to us, and to strive to maintain its honour untarnished. And if, in after life, you are harassed by the trials and perplexities of practice; if you sometimes feel inclined to wish you had taken to some less anxious and more profitable occupation, I beg you to remember how great and how honourable are the objects in pursuit of which your lives are spent. Your work is to cure disease, to lessen human suffering, to prolong human life, and to soothe the last hours of those who have arrived at the end of their earthly journey. I know of nothing better worth doing, nor of any work more beneficent."

SHEFFIELD SCHOOL OF MEDICINE.

Dr. DYSON stated that medical students had a right to expect from their lecturers some word of encouragement and advice on their undertaking the study of such an important science as that of medicine. Having given a hearty welcome to the new and old students, and expressed his good wishes for the success of those who were leaving the school, he alluded to the difficulty which he experienced in choosing a subject for an introductory address in these days when addresses on medical topics were so numerous and fashionable. "However," he said, "I have decided to erect a few beacon-lights, which may serve to warn off those of you who may be tempted to sail in shallow waters, to give a few directions to those of you who may not have the tact to clear the straits of examinations, and, lastly, to ask you all to dive more frequently and deeply in a part of the ocean of medical knowledge which will repay your more industrious toil." He then claimed thoughtful consideration for various topics which concerned the curriculum and method of study of the medical student, and he emphatically urged and maintained the value of imparting knowledge by the lecture system, and briefly indicated its advantages over the book-reading and "coaching" methods of study. He advised an early cultivation and discreet exercise of the habit of taking notes on lectures and cases; and, in reference to the question of indexing note-books, which was thought to be a trivial one, he urged that it really was an important matter. He said: "A case will often be utilised, if it can be found in a few seconds; but if the reference necessitates the rummaging through two or three large note-books, I am sure that, by the diligent student, as well as by the busy practitioner, that reference will be referred to a more convenient season."

Dr. Dyson advised the first-year's student not to attempt the study of collateral subjects, such as biology and physics, at the same time as the large and important subjects of anatomy, physiology, and chemistry; and he recommended him also to treat medicine and surgery with a sparing hand. He asserted the value of revising the winter subjects during the summer session, and the desirability of passing the primary examinations at the end of the second year. He advocated the holding of hospital appointments, and a free use of the apparatus employed in physical diagnosis, as invaluable in the attainment of practical and useful knowledge. He further insisted, as essential to future success, on the habit of personally verifying the statements of others.

"It is not enough for you," he said, "that the visiting surgeon informs you that here is a fluctuating tumour, or that the visiting physician tells you that there is an aortic murmur. However great may be your respect for Mr. A's opinion or Dr. B's diagnostic skill, you must satisfy your senses of the facts which they describe. If there is one act more than another that stunts the knowledge of the student of science, it is the too frequent nod of the head, which, like Lord Burleigh's nod, may be construed to mean equally assent or dissent, pleasure or displeasure; if there be one word more than another that wrecks his usefulness in after-life, it is the word 'yes,' which, alas! is sometimes used to cloke a considerable amount of clinical ignorance. Personal verification must be your first and fixed principle in the study of diagnosis; for if your premises be wrong, your conclusions, however logical, will be inaccurate. Be honest with your senses, and I can promise you that this kind of honesty is the best policy, and will remunerate you in days to come."

In the next place Dr. Dyson invited the attention of the students to the subject of pathology and morbid anatomy, and he proceeded to show the importance of this subject as an agency in the advancement of medical science by a reference to a few of its discoveries. He lamented the absence of it in its practical aspects from the examinations of the licensing bodies and examining boards, and he indicated the necessity of practical work in the dead-house, in order that the student might prepare himself for the position he would be called upon to take in after-life at the inquest, police-court, and the assizes. He then dealt with the excuses which the student made for the neglect of this work, discussed the relation of the subject to therapeutics, and dwelt upon the recent advances made by the science. He said: "I have tried to prove to you that pathology has been and is one of the main spokes in the wheel of medical science, that its position is in the van of the army of therapeutists, that in some cases it is the key to the detection of crime and the *sine quâ non* to the administration of justice; that though it is somewhat difficult to follow in all its flights of research, it repays the industrious fisherman sometimes by great 'catches,' always by good 'sport,' and lastly, that at the examinations of the licensing bodies and examining boards it is conspicuous by its comparative absence. If all these tales about it be true, I claim from every student here to-day a consideration for it which shall be more kindly and an acquaintance with it which shall be more deep and practical."

Dr. Dyson then made a feeling allusion to the loss which the school had sustained by the death of Mr. Wm. Baker, the late lecturer on Toxicology; and the students and lecturers were congratulated on the valuable additions made to the educational staff by the election of Messrs. R. J. Pye-Smith and W. D. James as Demonstrators of Anatomy. He also notified to the students the especial recognition by the Senate of the Edinburgh University of Dr. Drew's lectures on Public Medicine.

The lecturer concluded by saying:—"I urge you, gentlemen, to steer quite clear of the whirlpools of professional abuses. I solicit your best exertions for the maintenance of the honour of this small but important institution, and for the sustenance of the dignity and reputation of one of the noblest of professions. Lastly, I venture to hope that you will not only 'strengthen the roots and foundation of the science itself,' but that you will also be successful in the practice of that art, the great aim of which is the relief of wide-spread human misery by which we are so densely surrounded."

THE NEW LINCOLN COUNTY HOSPITAL.

AFTER standing just a hundred years, the well-known Lincoln County Hospital has been pulled down to be replaced by a handsome building to which we wish all success and prosperity. A bazaar, which has realised the extraordinary sum of £4000, has lately been held in order to supply funds to assist in the rebuilding of this hospital, and the fact that so large an amount was raised is in itself the best evidence of the high estimation in which the advantages it affords are held by the surrounding population. The old hospital, according to Mr. Sympson, the senior surgeon, who has published a small *brochure* upon the subject, the proceeds of the sale of which are to be devoted to the funds of the new hospital, was a very miserable affair, the building, first used in 1769, affording accommodation for only ten in-patients, and forty out-patients. In 1777, a substantial red-brick building on the summit of the Steep Hill, just below the Castle, was opened as a hospital. This, which has been removed to make way for the new hospital, consisted of a main block, about eighty feet long, facing due south, and having at either end a short wing running out at right angles. It contained a ground floor, first floor, and second floor. It had four wards to accommodate twenty men and twenty women, in addition to eight small rooms for accident patients, and the usual offices for out-patients, apothecary, matron, and servants, besides being fitted up with baths, &c. At the period of its foundation Lincoln appears to have been a quiet little cathedral town of 7000 inhabitants, with but little activity in trade or manufactures. In such a population accidents are few, and Mr. Sympson has ascertained that severe accidents usually did well, and that a fatal result in formidable operations was quite exceptional. At length, however, with improvements in the drainage of the surrounding fen and heath country, farms sprang up, and, with improvements in the navigation of the river Witham and the Foss Dyke, means of transit for produce were afforded, which together led to the development of an extensive trade in flour, in the formation of large works for the manufacture of agricultural and other machinery, in bricks, and, lastly, in ironstone. The population at the present day is estimated at 31,000, and, as might naturally be expected, there has been of late years a greatly increased strain on the hospital resources, whilst the evil effects of overcrowding and of polluted water-supply were early felt, exhibiting themselves in the usual form of outbreaks of pyæmia, erysipelas, sloughing of wounds, and diarrhœa—outbreaks which recurred notwithstanding that every effort was made, by removing adjoining houses and changing the water-supply, to improve the sanitary conditions of the patients. In 1854 the medical officers called the attention of the governors to the unhealthy state of the building. In response the Committee ordered the rooms to be heated by stoves, which raised the interior to a temperature of 180° F., and was considered sufficient to kill the germs of all infectious diseases. The relief, however, only proved temporary, and the hospital soon had to be closed. After various attempts had been made to render the hospital habitable, which all, for obvious reasons, failed, Captain Galton was asked to report on the condition of the building. His report was short and decisive. He thought an immediate expenditure of £9000 was requisite to render the old hospital fit for the reception of patients, and that £25,000 would be required if the hospital were to be rebuilt. After much discussion, the governors, as we think, most happily, determined to clear away the old hospital, and rebuild it completely. The foundation-stone was laid on the 29th July, 1876, and it is now just completed and ready for patients. It appears to be in every way a well-arranged building. It stands on a space of about eight acres, facing nearly due south, and consists of a central or administrative block, and two pavilions, all being connected by a corridor upwards of ten feet wide on the ground storey, and by a covered way of the same width on the first storey, the whole being in the form of an **H**. The architect is Mr. Alexander Graham, already favourably known as the architect of the Swansea Infirmary. It provides accommodation for about 110 in-patients, and when the back parts of the two pavilions which are not yet completed are opened, there will be ward accommodation for more than 200 patients. The external aspect of the new hospital is imposing, the central block being five storeys in height. Wide stone staircases of easy ascent are provided both in the central block and in the pavilions, each of which consists at present of two wards 88 feet long by 26 feet 6 in. wide, the lower one being 14 feet and the upper 16 feet high. The warming of the wards and offices throughout is by open fires, and of the corridors and chapel by hot-water pipes, and special provision has been made in every part for ventilation.

The old Lincoln County Hospital had a good history, and many able men were connected with it; but, without disparaging its past officers, we may say that it now possesses a singularly able and efficient staff, and we augur for it a brilliant future. We cannot conclude this notice without acknowledging our indebtedness to the "Short Account of the Old and New Lincoln County Hospitals," which has been so well drawn up by the senior surgeon, Mr. Thomas Sympson.

THE LANCET.

LONDON: SATURDAY, OCTOBER 12, 1878.

WE have already said that the General Medical Council will meet on Thursday, the 17th inst. The Council has already had two meetings this year, one in April, the other in June. As far as we remember, it is an unprecedented occurrence for the Council to meet thrice in one year. The explanation is that though the Government failed in passing its own Medical Bill last session, it gave such countenance to the Dentists Bill as to secure its passing, and this Bill throws upon the Medical Council the duty of regulating the Register of Dentists created by the Act, and the examinations to be gone through in order to obtain certificates in dental surgery from the surgical corporations empowered to grant them—viz., any Royal College of Surgeons in the United Kingdom, or the Faculty of Physicians and Surgeons of Glasgow. The approaching meeting has reference chiefly to these new duties. The Register of Dentists will contain the names not only of the licentiates holding one of the certificates just mentioned, but of all persons who can satisfy the Council or its Registrar that they were *bonâ fide* engaged in the practice of dentistry at the passing of this Act. We shall be anxious to learn the view taken by the Council of what constitutes the *bonâ fide* practice of dentistry. It will be curious to see the heads of the profession summoned from the four winds of heaven, and from all the responsible duties of teaching and medical practice in which they are engaged in London, Dublin, and Edinburgh, and the university and provincial towns, to ratify the registration of a thousand or fifteen hundred dentists, in regard to a large proportion of whom dentistry means merely the extraction of teeth, entirely unassociated with any education in physiology, pathology, or general medicine. Such an occupation will be more flattering to the new dentists than it will be dignified in the General Medical Council or beneficial to the public. It is indeed amazing to see with what light-heartedness and almost eagerness the General Medical Council undertakes new and inferior work, especially when we consider how imperfectly it has discharged its old and high duties of consolidating and improving the examinations for the licence to practise medicine and surgery in the United Kingdom. There can be little doubt that the least opposition from the Medical Council would have prevented the passing of the Dentists Bill in its present crude form, or would have devolved upon others less weighted with undischarged duties the work of registering and regulating the examinations of dentists.

It is doubtful whether the General Medical Council will, at its approaching meeting, do more than get through its work in connexion with the Dentists Act. For this purpose it is thought that a sitting of two days will suffice. The expenses incident to this work of the Council will be met by fees to be paid by the new race of dentists, whose register will of course be distinct from the Medical Register.

It is scarcely to be expected that the Council, at a third meeting, should find time to consider the questions of medical politics and legislation which must soon again press on the attention of both the members of the profession and of the Government. It will be remembered that the Council has committed itself to a consideration of the question of its own constitution. It has declared that this constitution needs revision. Nay, more. It has literally engaged itself to consider, at the approaching meeting, what modifications of its constitution are demanded and required, and to report to the Government accordingly. When, very creditably, it undertook this duty in July, it was not probably intended that the Council should meet again till the beginning of 1879. In supporting the Dental Bill, they did not consider how they were multiplying the meetings and the functions of the Council. Be this as it may, the task of considering the revision and modification of the constitution of the Council is before them, and if it is postponed at the meeting it can only be so for a short time. With an undertaking on the part of the Council to report to the Government on the changes necessary in the constitution of the Council, and with all the machinery for instituting complete medical and surgical examinations in each division of the country, in a state of suspended animation waiting for this report, it is not conceivable that the report will be long delayed.

To us the present juncture in medical politics seems the most serious that has occurred since 1858, and needs the greatest wisdom and the greatest amount of professional loyalty on the part of the leaders of the profession. It is impossible to regard the situation without feeling that by carelessness, or by unfaithfulness, the members of the Medical Council may compromise the interests of the profession, and seriously impair its *prestige*. It is in vain to add severity to medical education and examinations if all sorts of semi-medical qualifications are to be recognised and established by law with the concurrence and co-operation of the Medical Council. With a new class of semi-surgeons—the dentists; with the pharmaceutists claiming the right to discharge semi-medical functions; with a prospective race of midwives, male and female, that will for all obstetric purposes consider themselves as good as fully educated medical men, the public may soon have reason to rue the day when the Legislature let down the ideal of medical education. There is yet one hope for the profession. It may still be possible to maintain a strong controlling power over all the examinations, and, all corporation interests apart, to hold high the doctrine that the profession can only uphold its reputation by upholding the education, preliminary and professional, of those who enter it. To this end the Medical Council must be so revised in constitution as really to represent the profession, and not, as hitherto, its mere corporations.

THE therapeutical use of lime-salts in the treatment of disease other than that of the intestinal canal is supported more upon observation in disease than on pharmacological experiment. Few attempts have been made to ascertain what evidence is to be obtained of their absorption into the blood, on which, of course, their general effect must depend. It is a question of much interest, since it is hardly necessary

to mention that most of the compounds of lime are among the least soluble of substances which are given internally. Such observations are of the more interest since it is probable that the power of absorbing lime-salts varies very much in the different classes of animals. BUCHHEIM-KÖRBER, for instance, gave dogs and rabbits, which were fed on bread and milk diet, a considerable excess of earthy phosphates—to the dogs in the form of bones, to the rabbits as the pure salts. He found that in the case of the rabbits a large excess of these salts was absorbed, and was excreted with the urine, while in the case of the dogs the whole excess of the earthy salts passed away with the fæces, and that even less was absorbed into the blood than under normal conditions. The weight of these observations is, however, lessened by the fact that the form given to the two sets of animals was not precisely the same.

NEUBAUER found that in the case of man the excretion of lime by the urine could be distinctly increased by its administration by the mouth. He gave to each of four young men a gramme of some lime-salt every night at bedtime, having previously determined the average daily excretion of lime in each case. In the first subject the normal excretion of lime, ·303 grm., was raised to ·397 grm. by chloride of calcium. In the second the normal, ·267 grm., was raised to ·310 grm. by carbonate of lime. In the third the normal, ·282 grm., was raised to ·324 grm. by acetate of lime. And in the fourth the normal, ·387 grm., was raised to ·489 grm. by phosphate of lime. Thus the urine contained in the case of carbonate and acetate of lime about one-twentieth of the quantity ingested, and in the case of chloride and phosphate of lime it contained about a tenth.

RIESSELL found that when carbonate of lime is given internally it appears in the urine as phosphate, showing that a change of acid occurs in the alimentary canals or in the blood. The carbonic acid is probably liberated in the stomach, but the portion of the lime which is not absorbed again combines with carbonic acid in the intestinal tract, passing away as carbonate. The transformation into a phosphate led to the expectation that the excretion of phosphoric acid might be increased by the ingestion of lime-salts. RIESSELL accordingly administered to a man ten grammes of chalk three times a day. He found at first a large increase in the amount of phosphoric acid excreted, but the excess soon lessened, and the amount fell to the normal. The natural relation between the alkaline and earthy phosphates was reversed. The alkaline salts became much smaller in quantity, while the earthy salts increased. The conclusion was reached, and corroborated by further observations, that phosphate of lime is formed in the alimentary canal, and is absorbed with difficulty on account of its low solubility, most passing away by the fæces, that the constant presence of considerable quantities of the phosphate gradually overcomes the resistance to absorption, and that a corresponding increase occurs in the amount of lime absorbed and excreted. These observations were in part corroborated by SOBOROW, although ZALESKY failed in the case of young pigeons to find any increase in the earthy constituents of the bones on the addition of a larger quantity of lime-salt to their diet.

The latest investigations on the subject have been carried out in SALKOWSKI's laboratory by Dr. LEOPOLD PERL, who has published his conclusions in VIRCHOW's *Archiv*. He employed especially chloride of calcium, and found, in the dogs to which it was given, an undoubted increase in the excretion of lime by the urine, although this corresponded to only a small fraction of the amount of lime administered. It was difficult to ascertain what that fraction was, since the amount of lime-salts in the food varies, and so also does that which is set free in the organism in the process of tissue regeneration. An estimation of the amount of urea excreted suggests that a larger destruction of albumen occurred before the lime was given than during its administration, and this probably entailed the liberation of a larger amount of lime. During five days before the addition to the food a total of ·153 grm. of lime was excreted; in the five following days, ·325 grm.; and thus at least ·190 grm. was apparently due to the calcareous diet; 7·12 grm. of calcium chloride was given, of which only 5·2 per cent. passed away in the urine. The amount of chlorine excreted was very remarkably increased by the diet, altogether 6·14 grm. passing away. The amount of calcium chloride taken corresponded, however, to only 4·6 grm., and thus all the excess of chlorine was eliminated, and in addition nearly half as much more. Another experiment, with the same dog, demonstrated that the quantity of chalk which, according to the first experiment, was not excreted could actually be found in the fæces. It thus appears that the chlorine and the lime have different destinations. The probable explanation of this is that the calcium chloride is decomposed by the alkaline secretions of the intestine, especially the bile and the pancreatic juice, carbonate of lime and chloride of sodium being formed, the former being eliminated by the fæces, the latter absorbed. But the whole of the chlorine of the urine is not in combination with sodium; a little of it is perhaps free as hydric chloride, but more is combined with ammonium. The probable explanation of this lies in the observation of GAETHENS that if acids are administered to dogs there is no increased excretion of bases, or only a slightly greater excretion than normal. No doubt most of the acid is neutralised in the intestine, and the alkaline carbonates which normally return as such into the blood, are decomposed, and the blood receives only neutral salts. If, in the system of a carnivorous animal, a considerable portion of free alkali is neutralised in one place, there is corresponding deficiency at another place—i.e., more acid is eliminated by the urine. WALTER has shown that these acids are for the most part combined with ammonia, which is formed in the carnivora in increased quantity when acids are given. Calcium chloride appears to act exactly, or almost, as an acid; it takes up in the intestine a certain quantity of alkali, which would otherwise have returned into the blood, and a corresponding amount of free hydrochloric acid, or more probably of ammonium chloride, must appear in the urine.

DR. B. W. RICHARDSON read a paper before the Sanitary Congress, on the 4th inst., at Stafford, "On the Constitution and Functions of a Minister of Health for the United Kingdom." This proposal has, during the last dozen years, been repeatedly urged and defended in THE LANCET. The anticipated change in the Registrar-General's Department affords a fitting opportunity for reviving the discussion, and we are glad that a member of our profession, who is so apt

and able an exponent of the functions to be discharged by a minister of health as is Dr. RICHARDSON, has seized the occasion, and, let us hope also, gained the public ear.

The broad outline of the suggestion is, as we have said, our own, and each year the persuasion grows stronger and clearer that it must in substance be adopted. The distressing and disadvantageous conflict of authority which now prevails, and the disjointed character of the efforts put forth when there is no actual collision, react most injuriously on the community. Where wide differences of official opinion and policy prevail, the right of private judgment is likely to be exercised; and, under such conditions, this is apt to take the form of a resolve in favour of inaction, particularly when there is something waiting to be done which will entail outlay, or may cause collateral inconvenience. Failure to gather up the fragmentary efforts made for the health of the country in one consistent policy, has certainly done mischief to the cause of sanitary enlightenment and reform which it will take years of energetic and harmonious action to overcome. Then, again, knowledge has outrun practice in regard to the public health, and this is in itself a great evil. The Registrar-General's principal function is to collect returns of vital statistics, and these are subjected to certain medical tests and analyses before they are submitted to the country; but inasmuch as the medical censorship has no effective control over the returns made to the office, and can only take them for what they are worth, the inferences derived are not of a nature to be accepted or enforced as bases of administrative authority; and the interpretation put on the figures—which ought to be facts—varies as the sagacity or enterprise of the local authority may determine. The Medical Department of the Local Government Board, the Metropolitan Board of Works, the Thames Conservancy, and the multitude of petty Boards controlling the central district, together with the local authorities throughout the country, have, it may be conceded, striven to work out the problem of health to the best of their ability, but it cannot be doubted that incomparably more might, and probably would, have been accomplished during the period in which Health has occupied a prominent place in general consideration, if, instead of a Babel of tongues discoursing on sanitary science and fulminating sanitary decrees, there had existed one intelligent and responsible expositor of the laws of health, armed with at least so much central authority as would enable him to secure the carrying out of his decrees.

Dr. RICHARDSON is careful to point out that any Ministry of Health which may be built on the lines of the Registrar-General's office—and he thinks that will supply the nucleus for the constitution he recommends—ought to be essentially educational and expository, not administrative. We do not entirely coincide with this opinion. The country has had large experience of consultative offices and permissive legislation, and the result is scarcely satisfactory. We venture to think the creation of a Ministry which is not to administer would add to the anomalies of the present state of matters instead of reducing the chaos to order, the confusion to harmony. It is even doubtful whether the holder of the office should not be also a member of the Cabinet. Under the system of government by parties it is generally desirable that the advantages of emulation should be secured for every part of the administration. When once Health comes to be recognised as a distinct department of the State, the work of reform will proceed rapidly. The picture sketched, in Dr. RICHARDSON'S masterly address, of a sanitary counsellor removed from the turmoil of political life, is, doubtless, attractive; but we think the public interests require the presence of a responsible Minister in the House of Commons, able to take his full share in the business of the country, and so placed that he may speak with authority in the name of Science on the thousand-and-one questions in which the health of the community is contingently concerned. This is the one great need of the time, to give State Medicine daily and hourly representation in the Legislature and the Cabinet. If a Minister of Health, so placed and empowered, had existed during the last two sessions of Parliament, there would have been ample scope for his interposition, and the services he might have rendered the country would have been conspicuously great and useful. The subject is one which calls for full and wide discussion. We cannot but feel thankful that it has been revived.

IT was not long since remarked in our hearing by a lecturer on the Practice of Physic at one of the metropolitan hospitals, that in consequence of the establishment of separate chairs for Pathology, Materia Medica, &c., there remained but little subject matter upon which the lecturer could frame his course. Such a remark is doubtless, in a certain sense, true, but we question, if the occupier of the chair of Medicine were the sole teacher of the principles and practice of physic, of pathology, and of materia medica and therapeutics, whether his task would be in any way rendered easier. On the contrary, we are rather disposed to assert that his labours would be infinitely increased. Condensation is perhaps the most difficult task presented to a lecturer, and condensation would be an absolute necessity, supposing the teaching of such subjects to be confined to one course of lectures by the same professor. Not only would the students suffer by the unavoidable shortcomings of a lecturer who in a large city has his time often more than fully occupied, but the science and art of medicine would remain at a standstill. It is absolutely necessary in our schools of medicine that the subjects we have mentioned—e.g., Pathology and Materia Medica—should be under the superintendence of men who are young in their profession, and who, therefore, are able to devote their time to such investigations, either experimental or otherwise, as the nature of the subject may require.

Perhaps few branches of medical learning have experienced so many vicissitudes as that of Materia Medica and Therapeutics, at one time occupying probably the foremost position among the subjects which engross the attention of the practitioners of medicine, at another discarded as being almost beneath the notice of any but those who are weak enough to believe in the "cure" of disease. This important study, in fact, may be said to have occupied, according to the spirit of the age, the highest and lowest position among the medical sciences.

The tendency to despise the action of drugs indiscriminately is an evil no less to be deplored than that of an unlimited faith in their powers, which would allot to each disease its direct antidote in the shape of some drug from

the Pharmacopœia. By adopting the former course in its entirety we, tacitly at any rate, confess ourselves, save by rest or mechanical means, to be as powerless in the presence of disease as those who have never received any training in medical science; by rushing into the opposite extreme we lay ourselves open to bitter disappointments and to grievous failures, which naturally tend to shake the confidence of the public both in the abilities of the profession and in medical science generally.

That certain drugs have definite physiological action has been proved repeatedly by those who have devoted their attention to such investigations. It is, therefore, as manifestly wrong to withhold their employment under circumstances in which their utility has been amply demonstrated as it would be to administer, on ancient theories, infusion of roses with a view of checking profuse hæmorrhage, or, according to more recent notions, to give belladonna to a patient suffering from scarlatina because this plant, in some cases, produces a red rash on the skin.

It is doubtless the mark of the good physician to know when to withhold his hand, and to rely, under fitting circumstances, on the *vis medicatrix naturæ;* but it is no less his duty to call into action, when occasion requires it, the full strength of the armoury placed at his disposal. We would earnestly deprecate absolute scepticism in the employment of drugs, and we would as strongly condemn a blind faith in their efficacy in the treatment of disease. Materia Medica and Therapeutics are so intimately connected that a neglect of the former must necessarily lead to ignorance of the latter; and by ignorance of the latter the physician stands, not as an agent of good, but merely as a passive spectator; instead of taking up his position, where circumstances permit, and as his calling would seem to require that he should, rather as an attacking force, he rests content with watching the movements of the enemy, without in any way attempting to counteract them. We have no wish to see any reversion to the system of drugging the patients, but we do certainly maintain that a physician who neglects the use of any known remedy under conditions in which its value has been clearly and repeatedly proved, simply upon sceptical grounds, is deserving of blame, especially if convalescence be protracted, or more serious results follow.

In the revolution which salicylic acid has effected in the treatment of rheumatism is to be found a most cogent argument for the necessity of prosecuting with increased vigour the study of materia medica and therapeutics. The remarkable results which have been obtained from the use of this drug in one disease cannot but stimulate inquiry on these subjects generally. There are still, it is to be regretted, very many unsettled questions in therapeutics, and among them one especially presents itself to practical physicians—viz., the treatment of disease with or without alcohol. The advocates on both sides are equally positive in their assertions in favour of their own particular views, but, in spite of all that has been said and written both for and against it, the question has still to be decided by further observation. It is a subject which merits the closest attention of all who are engaged in the practice of medicine, and more especially of those who are in the position of medical officers to hospitals or infirmaries. The commencement of the medical session seems to afford a fitting opportunity to call the attention of those who are engaged in hospital work, whether as medical officers or students, to this important question of the use of alcohol in disease.

Owing to the labours of such careful observers as Professors RUTHERFORD and VIGNAL, our knowledge of the action of drugs has of late received remarkable additions; for example, their experiments on the physiological action of such bodies as euonymin, sanguinarin, iridin, &c., show that we have in certain drugs, hitherto unknown, hepatic stimulants of considerable power, and which may in many cases prove useful in supplementing, or perhaps under some circumstances replacing, such cholagogues as rhubarb and mercury. It rests, however, with those who are actively engaged in the daily work of the profession to make a practical use of these experiments, and by a judicious employment of medicines, in those forms of disease in which their physiological action seems to be indicated, to add to the means at our command for the alleviation of human sufferings.

THE miserable catastrophe that occurred on the Thames some weeks ago has, curiously enough, brought into prominent notice an evil that has been growing, so to speak, in our midst, but has hitherto attracted, comparatively speaking, very little attention. The Metropolitan Board of Works has always taxed us heavily, and has spent the money of the ratepayers lavishly enough. But we are specially proud of our embankment, and look forward to the time when London shall rival Paris in beauty, as she has done long since in utility and wealth. As for the drainage works, the majority of Londoners have ceased to think about the water. The authorities at Spring Gardens contrived somehow to get rid of the sewage, but where it went to few knew, and no one seemed to care. But the events of the last month have sufficiently demonstrated that the great local authority presided over by Sir J. MCGAREL-HOGG does not in its gigantic undertakings always command success. The sewage of the metropolis, it is true, no longer flows out from a hundred outlets into the river before our eyes and noses. We see and smell less of it than formerly, but, let the Chairman of the Board of Works and his colleagues protest ever so much, we are conscious of the fact that, in spite of an expenditure of several millions, the sewage problem is yet unsolved. We not only continue to befoul our grand old river, but are destroying its channel for purposes of navigation, and, at the same time, wasting material that for manurial purposes ought to be, and doubtless is, exceedingly valuable. So, at least, say the Conservators, who, representing commercial interests, have just driven in the thin end of a very considerable wedge by publishing an official report upon the state of the river entrusted to their care. It has occurred to us, therefore, in the interests of the metropolitan community, to sift the very contradictory evidence adduced on this subject, and by judging for ourselves, to judge for others how far these sewage outfalls are injurious, and whether a radical remedy exists for the present unsatisfactory state of things. It must be remembered, however, that as yet the metropolitan main drainage outfalls are not the only pollutors of the Thames. There are, in spite of the Rivers Pollution Act, some ten or twelve towns, above Wandsworth and Chiswick, that pour their entire drainage into the river.

True, it is expected that these nuisances will cease within the next two years. But then we shall have to deal with the West Kent Drainage Works, which is to have an outlet for its "effluent water" just below Dartford Creek. All these smaller works must be taken into consideration, and in apportioning blame and dividing responsibility, it is well not to attempt to prove too much.

Annotations.

"Ne quid nimis."

WHO IS TO BLAME?

ON the eve of going to press we observe in the daily journals of the 10th inst. a record of events at Cyprus showing that the statements made in these columns and elsewhere, as to the sanitary condition of the troops, are not exaggerated. Meanwhile we are still utterly in the clouds as to the exact nature of the disease with which these unfortunate men are stricken. Is it malarious fever at all? From several accounts that have reached us, the disease appears, so to speak, to stick to the patients, even when removed to places in the island considerably elevated above the sea, and thus of course entirely free from what may be called ague miasma, or anything allied thereto. Is it a fact, as has been hinted, that there is a want of good and fresh vegetable diet in the island, or rather that the Commissariat has not thought fit to provide it? and if it is not provided, why do not the medical staff persistently requisition for such things, until they are forthcoming? We want to know, lastly, who is to blame for this disgraceful state of things, which Colonel Stanley's postprandial speeches notwithstanding, need not have occurred in a country that was peacefully and quietly annexed, and might have been stocked with soldiers deliberately and carefully, with comparatively speaking little or no danger to the health of those sent.

PERMISSIVE HEALTH LEGISLATION.

WHILE it is impossible to deny that health progress has been and is being made generally, and more especially in our larger towns, it is as impossible to doubt that our permissive sanitary system has proved a failure in a large number of sanitary districts, mainly for want of a central health authority possessed of the necessary earnestness to put in force the very moderate compulsory and controlling power vested in the Local Government Board by the Public Health Act of 1875. Those who believe that our present system of sanitary administration is satisfactory should read a recent report upon the sanitary condition of Tredegar, a local board district in Monmouthshire, by a medical inspector of the Local Government Board. Tredegar, it may be premised, is a typical specimen of those comparatively recent urban aggregations in mining and manufacturing districts the sanitary neglect in which counteracts the improving sanitary condition of our large towns, produces the high death-rates in Lancashire, the West Riding of Yorkshire, Durham, and South Wales, and causes the national death-rate to remain apparently stationary, in spite of general sanitary work and expenditure. A serious outbreak of fever in Tredegar in 1869–70 caused a special sanitary inspection of the town, which was instituted by the Privy Council and carried out by Mr. J. Netten Radcliffe, who was entrusted with a second inspection in March last, in consequence of the excessive fatality of zymotic disease. During the eight years 1870–7 one or other form of continued fever has never been absent from the district, and enteric fever has been endemic. The main result of the second and recent inspection is to show that the conditions which gave rise to the fever epidemic in 1869–70, and which were then reported upon, remain substantially unaltered at the present time, while some of the sources of nuisance have since then become intensified by continued neglect and by increase of population. For instance, houses which were reported upon in 1870 as "altogether unfit for human habitation" are still occupied, are now described to be in a "still more wretched state," and create astonishment that "miserable inhabitants can be found to pay rent for occupying them, or that houses so utterly unfit for human residence" should be allowed by the local sanitary authority to be occupied. The present amount of overcrowding (although the iron trade is just now depressed), the unsatisfactory nature of the water-supply, the imperfection and foulness of the sewers (even worse now than in 1870), and the abundance of privy nuisances, fully and sufficiently explain the fatal prevalence of zymotic diseases. It is evident that the sanitary powers of the local board of Tredegar have been and still are almost entirely in abeyance, and the reports of the medical officer of health and the surveyor, who acts as inspector of nuisances, are "virtually treated as waste-paper." No serious attempt has been made to abate the fatal nuisances which are rampant. In order that the degree of sanitary neglect in Tredegar might be appreciated, this report should be read in its entirety. It affords striking evidence of the utter farce, in such cases, of permissive sanitation, unless supplemented by a central health authority willing to exercise the moderate powers conferred upon the Local Government Board by Section 106 of the Public Health Act of 1875. The present sanitary condition of Tredegar is not only a source of danger to itself, but to the surrounding country.

LIME-JUICE AND LEMON-JUICE.

WHEN the Merchant Shipping Act of 1867 became law, one of its principal sections was so drafted as to ensure that the special antiscorbutic provided for the sailor at sea shall be of good quality—i.e., free from adulteration, and also, with a view to its preservation, that it should be mixed with a certain small amount of alcohol. We believe that these conditions are, and always have been, properly fulfilled, and that the lime-juice or lemon-juice starts from the bonded warehouse in which it has been examined and mixed in good order. But a good article, and of this kind especially, may be palatable or unpalatable. No legal provision was made for the clarification or refining of the juice, partly, as it was considered, on the score of additional expense (which would be thrown upon the shipowner), and partly from a preconceived idea that the abstraction of the thick and pulpy particles might militate against the antiscorbutic properties of the article, no one, even at the present day, knowing apparently in which ingredient or group of ingredients this property rests. Be this as it may, our attention has on several occasions been directed to the fact that much of the juice sent out for the use of crews is thick, pulpy, unpleasant to the sight, and hence (as it is asserted) unpalatable. Samples have been forwarded from the Montserrat Company, one of which shows a beautifully clear preparation which, as the makers assert, is now used exclusively in all Queen's ships. The other is a thick, and certainly a very uninviting article, which may be, and probably is, unadulterated, and much of which, as we are aware, finds its way into merchant vessels, inasmuch as in its preparation all the requirements of the Act are complied with. Of course the plan recommended is that all juice should be clarified and prepared according to the mode adopted by the Montserrat Company. There are, however, two sides to the question. We are not prepared to recommend its adoption

because the Admiralty use this form of juice, for it is notorious that the latter department took a leaf or two out of the book of the Merchant Shipping Act above quoted, and reformed their rules somewhat in the lines of action recommended at the time that the Bill was under discussion. It must be recollected that the complaint about unpleasant look and taste cannot go for much, for the juice, both in the navy and the merchant-service, is mixed with six or eight times its bulk of water, and afterwards sweetened with unrefined sugar, so that the former has lost its brilliancy and the latter some, at all events, of its muddiness, before it reaches the mouths and noses of our blue-jackets, much less their stomachs. Those interested in this question should send varieties of lime- and lemon-juice out for several successive voyages, test a sample at the end of each, and then compare conclusions. If the thick preparations have deteriorated chemically, either as to quantity of acids, dried residue, &c., a *primâ facie* class of evidence would at once be established on which to urge the Board of Trade to reform their mode of working. But it has yet to be proved that the clear preparations are better therapeutically than those in which the pulpy materials are left.

THE TREATMENT OF THORACIC ANEURISM.

IN an article contributed to a recent number of the *Revue Mensuelle de Médecine et de Chirurgie*, Dr. Dreschfeld, of Manchester, deals with the three chief methods of treatment of aortic aneurism—viz., that by the administration of iodide of potassium, that of restricted diet and enforced rest in the horizontal position, and that of galvano-puncture. He prefaces his record of six cases in which some or all of these agents were employed by a slight sketch of each method and its *rationale*. He bears strong testimony to the efficacy of the iodide, first introduced by Bouillaud, and since warmly advocated by Balfour and others, but admits that it is not positively known how it acts. It probably slows and diminishes the action of the heart and the arterial pressure—an effect due rather to the iodine in the salt than to the potassium. Large doses (he advises small doses to commence with, and their increase up to six grammes or more), long continued, often give good results, especially in old subjects, and when the aneurism is of recent formation and small in size. Of the second plan—best known as Tufnell's treatment—that of absolute recumbency and a restricted non-liquid diet, Dr. Dreschfeld states that in nearly all the cases he has employed it the pulse-rate has been much diminished. Galvano-puncture, however, is the most certain in its effects of all the methods, since it promotes coagulation in a threefold manner: chemically, by the electrolytic decomposition of the water and salts of the blood; mechanically, by the inserted needles acting as foreign bodies; and thirdly, by acting as an irritant and exciting inflammation of the wall of the aneurism. The ill results that sometimes, but rarely, happen from its use he believes to be preventable, and he has never seen any embolism occur from detachment of clot formed during the procedure. The currents employed should be of weak intensity, and the time during which they should be allowed to pass ought to be at least thirty minutes. The needles should be of steel, and should be long and fine, well-pointed and polished, and coated with insulating material, such as varnish or gum, except at the points. Two or three may be inserted, not too close together; and it is best to connect them with the positive pole, the negative electrode being a moistened sponge applied to the skin in the neighbourhood of the tumour. In one case, however, the needles were attached to the negative pole, and with good result. The number of elements employed should be at first small, and should then be gradually increased at intervals of five minutes; and he allows three or four weeks to elapse before repeating the operation. Details of six cases are then given. The first, an extensive fusiform aneurism of the ascending aorta in a gardener thirty-eight years of age, was first treated with the iodide, and three weeks later by galvano-puncture, the negative pole being in the sac, and the number of elements (Weiss) increased from five to fifteen. The operation was followed by marked improvement, and was once repeated. The patient lived for nearly four years, pursuing his ordinary avocations, and the sac of the aneurism was found to be largely occupied by a thick firm material resembling embryonic fibrous tissue. In the second case, also of the ascending aorta, much relief was produced by the iodide and by rest, but the patient died soon after from an intercurrent attack of pericarditis and pneumonia. In the third case all three methods were had recourse to, and galvano-puncture was thrice performed, the needles being connected with the positive pole. The number of elements ranged from three to twenty-two, and each operation lasted about an hour and a half. The tumour, which was of the size of a small apple, ceased to pulsate, and became firm, remaining so six months afterwards, when the patient, a female forty-four years of age, was last seen. The fourth case was one of a very formidable character, the aneurism almost filling the left half of the thorax, and being on the point of rupture. In spite of iodide of potassium, morphia, and the application of ice, it continued to increase; and a week after admission galvano-puncture was had recourse to. Two needles connected with the positive pole were inserted, five to twenty-nine elements used, and the operation continued for two hours. It was repeated again a month later, when four needles were used, and the current allowed to pass for three hours; and again about three weeks afterwards, when the operation lasted for four hours. A fourth galvano-puncture was made within three weeks from the third; but death occurred ten days later. In the remaining two cases, the iodide and Tufnell's treatment were employed; in one with great amelioration. Dr. Dreschfeld thinks these cases show the advisability of combining, as far as possible, all three methods of treatment, employing first the medicinal, dietetic, and postural methods, before having recourse to galvano-puncture, which should, however, in no case be long delayed. He has seen no benefit from the subcutaneous injection of ergotin, and thinks ligation of the carotid should be restricted to cases of innominate aneurism.

THE RADCLIFFE INFIRMARY.

THE *Oxford Chronicle* gives the particulars of an inquest recently held at the Radcliffe Infirmary, which must puzzle the profession generally, especially hospital staffs, as it appears to have puzzled the city coroner (E. L. Hussey, Esq.) and the jury. A man, who seems to have been quite well known, was picked up in the streets of Oxford, apparently in a fit, and conveyed to the infirmary. He there had a series of epileptiform seizures, exhibited other symptoms of cerebral disease, and died about the seventh day after admission. A post-mortem examination disclosed mischief sufficient to account for the fatal illness. From beginning to end of the matter, nothing, as we understand the case, occurred to lead the infirmary officers to give information to the police—in other words, nothing to suggest foul-play. Nevertheless, after death, the house-physician refused to certify the cause of death, and the secretary, under instructions from the board of management, sent a *printed* notice of the death to the city coroner, stating that a medical certificate could not be given, and requesting that an inquest might be held. Mr. Hussey felt that he had no choice, under the circumstances, but to accede to the request and summon a jury. In the course of the inquest, the foreman expressed astonishment at the circumstances under

which the jury had been summoned, and stated his opinion that the inquiry was unnecessary—an opinion in which the coroner concurred, remarking, at the same time, that the *printed* notice from the secretary of the infirmary seemed to imply that the board of management of that institution thought it desirable that an inquest should be held on every patient who died there. In other words, as we understand it, that the board, of its own motion, was desirous that patients treated in their hospital should, as to deaths, be placed in the same category as the law requires as to deaths in lunatic asylums! We must hesitate to credit the board with such a preposterous notion.

DIPHTHERIA FATALITY IN THE METROPOLIS.

IN June last diphtheria assumed epidemic fatality in the north-west districts of London, and although this fatality locally subsided, the deaths referred to the disease within the metropolis have ever since shown a continuous excess. In his last Weekly Return the Registrar-General reports that during the week ending 5th instant diphtheria caused 20 of the deaths registered in London, showing an excess of 11 upon the corrected weekly average; 2 were returned in St. Pancras, 3 in Islington, 3 in Shadwell (of which two occurred in one family, and one in the Children's Hospital), and 4 in Camberwell. Thus the largest number of fatal cases occurred in the North, East, and South groups of registration districts. The deaths referred to diphtheria in London, which had been 104 and 147 in the first two quarters of the year, were 131 in the thirteen weeks ending 28th September. In the first nine months of this year 382 fatal cases of diphtheria were recorded in London, against 266 and 220 in the corresponding periods of 1876 and 1877. During the four years 1870-3 the average annual death-rate from diphtheria in London was equal to 0·09 per 1000, while in the following four more recent years the rate rose to 0·12. The rate from diphtheria during the first nine months of this year has been equal to 0·14 per 1000. It is probable that a portion of this apparent increase is due to more correct diagnosis of the disease; fatal cases of diphtheria are, however, even yet not unfrequently returned as deaths from croup or laryngitis. Diphtheria is the only filth-disease which shows a comparatively greater fatality in rural than in urban districts. It has yet, however, to be shown why this intensely contagious disease seldom assumes in large towns the epidemic virulence which often prevails in rural villages and small towns. The mortality from diphtheria in London would, indeed, assume alarming proportions if the disease were to prevail there with the same intensity it has recently shown in many Welsh villages and in Bedford.

YELLOW FEVER.

THE epidemic still continues, and the misery and distress caused by it increase daily. According to advices of the 9th inst. 49 deaths occurred on that day in New Orleans, and 33 at Memphis. On the 6th 52 deaths occurred in New Orleans, the weekly list in this city now being 360, at Memphis 230, at Vicksburg 70, at Bourneville 20, at Morgan City 18, at Chattanoga 18, and 57 in other smaller towns. The Surgeon-General sends this report, and announces also that the Government has issued 40,000 additional rations to destitute people in New Orleans. A letter from Vicksburg, that appeared in *The Times* of the 10th inst., says that the thermometer was registering 93°, and that the fever was increasing again, caused by the return of refugees from the country. The Howard Association have chartered a steamer to carry medicines and supplies to infected points above the city on the river bank. Provisions are much needed, and the cotton is wasting in the fields, as there are no hands to look after the land. At Holly Springs, Mississippi, ten physicians are ill, and four have died. Some brief notes from New Orleans are published, but they do not appear to throw any definite light on the causes influencing the virulence of the epidemic. For such particulars we must wait until the storm has passed. All seem to be agreed that the system of intramural interments has helped to perpetuate the epidemic and to increase its intensity. For it appears that there are now no less than 3500 corpses within the city, many of them covered only with six inches of loose earth, and others interred above ground in brick vaults. Two of the cemeteries are in the very heart of the city, and the residents in the immediate neighbourhood say that the noxious smells proceeding from them are sometimes unbearable.

THE FACULTY OF MEDICINE IN THE UNIVERSITY OF DURHAM.

IF we may judge from the Report of the Registrar, Dr. L. Armstrong, the Newcastle School of Medicine in connexion with the University of Durham is prospering, or at any rate deserves to succeed. The number of students last year was above the average. The grace passed two years ago by the Senate, by which registered practitioners of fifteen years' standing are eligible for the degree of M.D. by examination, is likely to work well. We think all the better of it when we hear that only four candidates applied in 1878, of whom three passed. This looks as if the thoroughness of the examination was such as to have a deterrent effect. A new Scholarship in Pathological Anatomy was announced by Dr. Armstrong. Dr. Gibb, senior lecturer on the subject, has placed £500 at the disposal of the school for this purpose.

PORT SANITARY WORK.

DR. HENRY YELD has just presented to the sanitary authority of the port of Sunderland his third annual report. Sunderland is one of the very few places where a systematic inspection of all vessels has been provided for. A total of 1754 craft of all kinds were visited during the year under consideration, 1647 of which were British and 107 foreign, 1233 being engaged in the coasting, and 521 in the foreign trade. Of these 1136 were found in good sanitary condition, 306 in a fair state, and 311 in a bad state. A comparison of each year's statistics shows that a progressive improvement has taken place, for at the commencement of the work in 1876, 60 per cent. of all examined required cleansing; in 1878 only 18 per cent. were found in a dirty condition. Dr. Yeld reports Danish and Dutch to be the cleanest, and Scotch the dirtiest vessels that trade to the Wear. The Corporation (as sanitary authority) have wisely provided a fever hospital for the town and port, and are about to build a second small hospital (for the latter exclusively) on the beach.

This brief report shows how much simple practical work can be accomplished at the outports with a very small staff, and, as we suppose, at comparatively small cost. It is, however, well to remind the officers of all port sanitary authorities that an important part of their duty consists in advising their compeers at other ports in the United Kingdom as to the existence of any disease among the shipping that is likely to be conveyed elsewhere by means of sailors, passengers, or cargo. Liverpool, for instance, is most likely to suffer by diseases imported from abroad, because most of the Mersey trade is purely oceanic. Southampton, on the other hand, is most likely to catch yellow fever before any other place, because it is in direct communication with the West Indies. Rochester would become infected by some other outport on the estuaries of the Thames, Medway, Colne, or Orwell, as the trade is almost purely coasting. And so on. London has a more mixed water traffic than

any other port in the kingdom, and so this sanitary authority ought to be posted up as to epidemics in the outports, as well as those that may be imported "from foreign."

THE SALE OF POISONOUS MEDICINES.

A PAINFUL instance of the continued laxity of druggists in the sale of poisonous medicines is reported by the *Doncaster Chronicle*. A young child died under circumstances which led the medical man called in to attend upon it, Mr. Withington, to express the opinion that it had been poisoned by opium. It appeared that the child had been given, for a cold, with cough, seemingly, two doses of a medicine prepared and sold by a druggist in Doncaster, and called "Black Currant Elixir." This medicine was advertised, or rather the label on the bottle described it, as "a safe and efficient cure for asthma, consumption, whooping and other coughs, colds, hoarseness, difficulty of breathing," &c., and directions were given for its administration in various cases, the quantities for children being stated in drops. On analysing this medicine, Mr. Thomas Scattergood, the lecturer on forensic medicine at the Leeds School of Medicine, found that it contained a small quantity of *morphia*, with sugar, vegetable red colouring matter, nitric acid, a little acetic acid, and a trace of alcohol. In evidence before the jury summoned for inquest on the body of the child, Mr. Scattergood confirmed Mr. Withington's opinion that the child had died from opium poisoning, and he expressed himself very strongly on the use of morphia in a medicine which might be given to children, and on the prescription to give the medicine to them in the loose form of drops. The jury gave a verdict to the effect that the deceased had died from an overdose of the medicine described, and expressed "their strong disapproval of the use of opiates, such as morphia, except under medical supervision." The coroner then directed attention to the fact that the bottle of medicine presented had not a stamp upon it, and that it would thus probably come within the provisions of the Poisons Act. He proposed to bring the matter under the attention of the proper authorities, and we shall, no doubt, hear more of it.

DEATH IN THE DRAINS.

FEW calamities are more unbearable than those in which we are involved by the folly or neglect of others, particularly the legally constituted guardians of the public health and safety. Imagine, for one moment, the bitter, though admirably restrained, indignation of a father who has lost three children from diphtheria, the direct and obvious consequence of the pestilential condition of drains at a watering-place! It is difficult to write in a temperate spirit of the gross ignorance or wilful carelessness shown by the local authorities in relation to the cases detailed in the newspapers by "A Seaside Visitor" and "Inconsolate." It is something more than indifference to the life of the public which is manifested by boards or vestries who thus inexplicably violate the commonest rules of health and safety. Non-ventilated drains are not merely reservoirs of poisonous gas, but perpetual sources of peril to the inhabitants of the districts which are cursed by their presence. This is perfectly well known to the community at large, and lack of scientific certainty cannot, therefore, be pleaded as an excuse. The subject of sewer-gas and its treatment has been discussed in every periodical and has formed a prominent topic of debate at every sanitary congress since the science of health became recognised among us. A condition of matters that would be discreditable to the *régime* of a half-civilised people is simply an outrage on British intelligence. It is useless to reiterate the trite arguments in furtherance of sanitary precautions. The time has come to seek for means of compelling the boards and vestries of suburban and provincial districts to act up to the information they possess. This, we must assume, can only be accomplished by a system which shall supersede the local authority or place it under the vigilant discipline of a central authority. We are not disposed to advocate a general policy of centralisation—our traditions all tend in the contrary direction; but there are matters in which practice may be required to override abstract principle, and the health of the people is a consideration so vital to the prosperity of the nation that the remedy for stupidity or neglect must at all costs be made effective. That death should be stored in the drains we construct—with the express object of carrying away a nuisance—is an evil so stupendous that nothing short of its complete and instant removal will appease the demand of public opinion. Local authorities will do wisely to look to their shortcomings and blunders in this respect, or measures may be successfully taken in an early session of Parliament to sweep away the pretence of self-government they affect and disgrace.

COFFEE.

PROFESSOR BINZ has been investigating the action of the constituents of coffee, which he finds possess a certain antagonism to the action of quinine. He injected beneath the skin of a strong dog ·7 gramme of caffein, and the temperature in an hour rose a degree Centigrade. With smaller doses (·2 grm.) the rise is slighter (·3° C.), and after large doses (about ·5 grm.) the elevation may be as much as 1·4° C., without there being any other disturbance obvious, except a somewhat stiff condition of the animal's muscles. Large doses also caused a considerable elevation of temperature, and death, with convulsive symptoms. This effect of caffein was hindered by curara and by artificial respiration. It was also found that moderate doses of caffein raised the blood pressure, the dogs employed for the experiment being only narcotised by alcohol, and neither curara nor artificial respiration being employed. Section of the vagus did not interfere with this result, and the elevation of the blood-pressure is thus not due to an influence exerted through the vagus.

Boutron and Frémy gave the term caffeon to a substance produced by roasting the coffee beans, and separating from a distillate with ether. It is an ethereal oily substance, and is found by Binz to have a stimulating action on the brain, heart, respiration, and animal heat. He agrees with Hoppe-Seyler and Voit, that the infusion of coffee or caffein in dietetic doses causes an increase rather than a decrease of the tissue changes.

THE SANITARY INSTITUTE OF GREAT BRITAIN.

WE doubt very much whether the interests of public health in general or of the Sanitary Institute of Great Britain in particular, will be served by the address of that veteran sanitarian Mr. Edwin Chadwick, C.B., recently delivered at Stafford. Addresses on public health appear to be now so frequently called for that those who deliver them may be excused if they fail to invest them with novelty, but it may at least be expected that the facts and figures with which such addresses almost invariably deal shall be fairly accurate. Mr. Edwin Chadwick's statistics might have passed muster well enough thirty or forty years ago, when he began to write and to talk about sanitation, and when the science of vital statistics was almost unknown. It is, however, time to protest against the public and authoritative enunciation, before, presumably, an audience of experts, of such statistical fallacies as crowded Mr. Chadwick's recent address at Stafford, which could be refuted by any modern tyro in vital statistics. In comparing the mortality of the urban and rural districts of Staffordshire, he debits Wolverhampton with a death-rate of 558 and 511 per 10,000 persons living, respectively, from zymotic diseases

and from diseases of the respiratory organs; this signifies a death-rate of 106·9 per 1000 of the population from these two classes of disease alone! We are told that the death-rate in Stafford County Gaol "has, during the last ten years, been actually less than 1 per 1000—not a tenth of the death-rates of adult outsiders"! And, on the authority of the Chief Commissioner of the Metropolitan Police (who only deals with facts known to the police), we are asked to believe that the death-rate during 1877 among "a population of 23,700 men, women, and children," residing in the London common lodging-houses, did not exceed 3 per 1000! The Metropolitan pauper schools are, moreover, once more held up as examples of triumphant sanitation, with characteristic disregard of the result of recent investigations. Nothing could be better calculated to discredit vital statistics, and to discourage their study, than the dissemination of the unscientific and fallacious figures that disfigured Mr. Chadwick's address, delivered on the 2nd inst., before the Sanitary Institute of Great Britain.

CLEOPATRA'S NEEDLE.

THE relic of antiquity which has so long been an outlying property of the nation, but which public spirit has failed to appropriate, has, after many perils and anxieties, been safely transferred to the metropolis, and, bearing in mind the incongruity of its new surroundings, the result is fairly satisfactory. In any event the task of removal has, by the liberality of one citizen, and the persevering ingenuity of another, been successfully performed. Honours are spoken of as an impending recognition of the services rendered by these gentlemen. Mr. Erasmus Wilson will, it is said, receive knighthood. It has yet to be seen how far the presence of Cleopatra's Needle in the metropolis may be useful to the interests of history or scholarship, but there can be no question that the long delay in bringing it over was in some sort a reproach to our public spirit, and that fault has now been repaired.

THE DISSEMINATION OF INFECTIOUS DISEASE.

THE Sheffield Corporation has recently taken proceedings against a draper, living in that town, for having sent away from his house by railway to Spalding an assistant in the early stage of small-pox, and thus exposing him in a public conveyance without proper precautions against the dissemination of the disease. The case broke down on the evidence of the medical man whom the draper had consulted, and under whose advice he had acted, and which went to show that the draper had acted without clear knowledge of the nature of the illness, and of the consequences, not to say illegality, of his act. The evidence of the medical man led to some severe strictures of the stipendiary magistrate upon his conduct, as it showed that while he thought it not improbable that the disease for which the assistant was sickening was small-pox, or, if not small-pox, chicken-pox or measles, he had advised the master not to wait until the actual nature of the malady could be determined, but to act upon the supposition that it was of an infectious nature, and send the youth a long journey by public conveyance home. Without exonerating the medical man and the draper from such responsibility as might attach to them, it may be remarked that incidentally a much more important question arose in the course of the case as concerned Sheffield. It appeared that, notwithstanding this prosecution established by the corporation as sanitary authority, Sheffield has no public (nor, indeed, even voluntary) provision whatever for the isolation of cases of infectious disease! That is to say, while the sanitary authority was thus attempting to enforce the sanitary law as regards the dissemination of infection against individuals, it had itself not carried out the provisions of the law which would enable individuals to meet its requirements in respect to isolation of cases of infectious diseases. Such a mode of sanitary administration must tend to discredit all sanitary law, and is a scandal upon a great manufacturing town and its municipality.

STATE MEDICINE.

THE examinations in Sanitary Science, at Cambridge, were concluded on the 4th October, and the following gentlemen became "holders of the Cambridge Certificate in Sanitary Science," or S. Sc. Cert. Camb.:—Dr. J. H. Arbuckle, of Liverpool; Surgeon-Major E. A. Birch, F.R.C.S., Bengal Army; Mr. N. B. Elliot, L.R.C.P., F.R.C.S., of London; Mr. J. Mathews, L.R.C.P.E., of Liverpool; and Surgeon-General J. T. C. Ross, C.I.E., F.R.C.S., Bengal Army. The examination was very practical, thorough, and searching. The candidates were tested by written answers to given questions, practically and *viva voce*, for six hours a day on each of the four days, consequently their attainments were thoroughly sifted in all the branches of sanitary science, and in the knowledge required for the work of a medical officer of health. Five gentlemen passed out of ten candidates. Last year the number was ten out of nineteen. The examinations took place in the Senate House of the University, and in the Chemical Laboratory. The examiners were Dr. Barclay, of Cambridge and St. George's; Dr. Ransome, of Manchester; Dr. Buchanan, of the Local Government Board; and Professor Dewar, of Cambridge.

LORD KERR ON ARMY SANITATION.

IT is refreshing to see commanding officers aiding in a practical way the efforts of their doctors to preserve health and prevent disease among the soldiers they command. Lord Mark Kerr, who commanded the 13th Regiment, was recently quartered at Morar, Gwalior, one of the unhealthiest stations in Bengal. According to some remarks made at Stafford the other day, it appears that his lordship, more, as he says, by persuasion than command, altered the hours of meals in his own regiment from 8 A.M. to 9.30 A.M., and from 1 P.M. to 4.45 P.M., giving the men at the same time light tobacco in lieu of the strong cavendish issued at the Government canteens. "No case of heat apoplexy occurred during the time he commanded his own battalion," and during the time it was at Morar the 13th stood at the head of the health report of the Presidency. We are almost disposed to wish that Lord Kerr had received a command at Cyprus, as just now his prophylactic notions might stand the unfortunate soldiers located there in good stead.

ENCEPHALOCELE.

A VERY rare case has been described by Muhr, in the "Archiv für Psychiatrie," in which the hernia cerebri presented beneath the nasal bones. During life it formed two tumours the size of walnuts, which lay on each side of the root of the nose, and extended against the nasal bones at the inner and lower angles of the orbits. They were covered with wrinkled skin, and lessened on pressure, without any sign of cerebral disturbance. Pressure occasioned also a fine crepitation. The patient, who was forty-two years of age, had been epileptic from childhood, and for ten years had presented gradually increasing dementia. He died of phthisis. The frontal portion of each hemisphere was continued into a projection, enclosed in the dura mater, covered with the nasal bone, and separated from one another by the adhesion of the falx to the crista galli. These processes were covered with grey cortical substance, and resembled the olfactory lobes of certain animals. They contained, however, no prolongation of the lateral ventricle, and beneath them lay the optic tracts, apparently normal.

On the basal surface of the left projection was a circumscribed area in which the pia mater was opaque and adherent. In the medullary layer of the peduncle of the process were irregular masses of grey substance, and also in the medullary layer of the frontal lobe, in front of the head of the nucleus caudatus. These contained peculiar cells, like those of the cerebral cortex. Otherwise the projection had the same structure as the adjacent part of the frontal lobe, and presented no resemblance to the olfactory lobe of animals. A peculiar degeneration of the large pyramidal nerve-cells was found in the precentral convolution, and in the frontal convolution of two other cases of mental disease the different stages of the changes in the cells were followed. First a pale ring appeared around the nucleus, due to the retraction of the protoplasm. This ring increased in size, while the protoplasm contracted into the processes of the cell, and finally the contour of the cell became less distinct, and only the nucleus remained. A portion of the cortex which had undergone this degeneration resembled closely the medullary substance; besides the undivided vessels only neuroglia and nuclei, in large pericellular spaces, could be seen. A careful description is also given of the bony skull in the case of encephalocele. The transverse diameter of the left orbit was considerably narrowed by the abnormal canal of the encephalocele, and the two nasal bones were completely fused. The bony canal of the encephalocele corresponded to the abnormally developed foramen cæcum. Ordinarily this foramen is occupied by a process of dura mater, which, according to Muhr, contains a large number of sympathetic nerves, and even sympathetic ganglia. It appeared, from careful measurements of the skull, that the deformity had not influenced the form of the rest of the cranium.

THE MEDICAL SOCIETIES.

THE first of the metropolitan Medical Societies to resume its sessions was the Obstetrical, which met on Wednesday, the 2nd inst. In accordance with the resolution passed at the last annual meeting, the Royal Medical and Chirurgical Society will hold its first meeting after the recess on the fourth and not the second Tuesday of the month, and will continue its session into June. Its first meeting will thus be on the 22nd inst. The Clinical Society assembles this evening (Friday), the Pathological on Tuesday next, the 15th inst., and the Medical Society on Monday, October 21st. The Lettsomian lectures of the latter body will be delivered in January by Dr. J. C. Thorowgood, who takes for his subject the topic of Bronchial Asthma, and the annual oration will be delivered on May 5th by Mr. Walter J. Coulson. Lastly, in connexion with the same Society, it is announced that the subject of the essay for the Fothergillian Gold Medal for 1879 is General Paralysis of the Insane, that for 1880 being the Pathology and Treatment of Dysmenorrhœa.

DEATH FROM STARVATION AND NEGLECT.

IT is high time that some one should authoritatively declare what are the symptoms which prove that death was caused by "starvation and neglect." It is, of course, easy for a coroner's jury to decide that such was the cause of death, but it is not to the credit of medical men that they should state confidently that death was caused by want of food and neglect, upon the mere fact of emaciation, and thus lead to a criminal charge with no scientific evidence to support it. The Penge case is sufficiently fresh in the memory of our readers to prove how difficult it is to substantiate such a charge even after a post-mortem examination. If we rightly interpret the facts of a case reported in the daily papers—that of Lydia Frances Morris, aged sixty-five—there is, upon the facts stated, no sufficient evidence either of starvation or neglect. The son-in-law of the deceased woman, on whom she was dependent for support, had been out of work for a fortnight, and admitted that they had not been able to get enough food. He sought medical advice for the deceased, and she was removed to the Union, where she was fed on "eggs, brandy, and milk, and revived for a day or two. Then she vomited black blood and mucus, proving unmistakably that the stomach was devoid of food." Of course this is only a newspaper report, and may not accurately represent the evidence given; but we should like to know whether a post-mortem examination was made, and whether it is not more probable that malignant disease of the stomach or liver was the cause of death. We trust that we are not to be treated to another Penge case on a small scale.

"MEDICAL BRUTALITY."

SUCH is the heading of an article in a paper called the *Harpoon*, printed in Newcastle-on-Tyne. The article sets out by assuming that doctors and butchers, by reason of their calling, are necessarily cruel, and then goes on to give the details of the case of a poor woman in labour, attended by a midwife, whose husband applied to two so-called medical practitioners, who refused to go. The one applied to last, however, in consideration of ten shillings, consented, after the lapse of many hours, to go. On arriving at the house, he found the patient dead. We should not care to refute the abuse of a paper that begins with an assumption that medical men must have blunted sensibilities, and compares their calling with that of butchers. But the death of a poor woman in labour, unvisited by a medical man, is so sad and so rare that we will venture to say this much—viz., that the persons who refused to go without prepayment were not medical men, and that the *Harpoon* will search in vain for their names in the Medical Register. When obscure prints try to write themselves into notice by libelling the most self-denying body of men, they should at least be sure of their facts.

THE MEDICAL COUNCIL AND THE UNIVERSITY OF DUBLIN.

THE REV. SAMUEL HAUGHTON, M.D., F.R.S., D.C.L. Oxon., has been appointed to represent the University of Dublin in the General Medical Council, Dr. Apjohn having resigned. Dr. Apjohn has represented the Council from the time of its creation in 1858. He has not been a talkative member; but he has always been listened to with much respect. He may be congratulated on having a worthy successor in a body where he will be missed.

THE ROYAL COLLEGE OF SURGEONS.

WE understand that, owing to the severe indisposition of one of its junior members, a vacancy has occurred on the Board of Examiners. We trust that in filling it up the Council will be rightly guided in the selection of a representative amongst the Fellows, without pressure being made for the selection of any favourite. Several schools are as yet unrepresented—Charing-cross, Westminster, the London, and St. Mary's,—and at either of these schools an eligible candidate can at once be named.

HYDROPHOBIA OR TETANUS?

THE difficulty in diagnosis between hydrophobia and tetanus in some instances seems to have been curiously illustrated by a case lately fatal in Guy's Hospital—that of a man named Riches, who was said to have been bitten by a dog two years before, and also to have fallen down a fortnight before admission and injured his right arm. The medical testimony was in favour of hydrophobia as the cause of death; but the coroner (Mr. Payne) expressed his opinion

that tetanus was the real cause. We should like to know more of the facts of the case. It is generally thought that the two diseases can be readily distinguished: but hydrophobia is very variable in its manifestations, and the characteristic mental symptoms may be almost entirely in abeyance; whilst in tetanus, the expression of the face and the mental anguish may lead inexperienced observers to the erroneous diagnosis of mental derangement.

CHOLERA AT FYZABAD.

OUR correspondent at Fyzabad, in a communication dated Sept. 10th, states: "Fyzabad, one of the military stations of Oudh, has been visited by a heavy outbreak of cholera. The troops at present in garrison are D. 5 R. A. and the 1st Batt. 25th Regt. One of this regiment was attacked on August 22nd. Cases followed rapidly in both corps. They went into camp speedily, but the disease continued to cling to them, and its fatality has been great. The women and children left in cantonments (afterwards placed under canvas) had also suffered very severely from cholera, and its incidence here was curiously synchronal with that of the camps. Up to last date (Sept. 10th) there had been ninety-eight cases and sixty-five deaths, but it is gratifying to state that during the last twenty-four hours there was no fresh case."

AT a special meeting of the Fellows of the College of Physicians, Ireland, held last week, the draft of the new charter, as arranged by the law officers of the Crown, was unanimously adopted. By it the president, fellows, and officers will be elected by ballot; a grade of members will be instituted between licentiates and fellows; and additional examiners can be appointed, if required, who may not be censors of the College. By the supplemental charter those at present possessing the licence in medicine may become members without payment of fees or any examination, and thus be entitled to a higher status and position in the College than licentiates. They are also qualified to hold professional appointments in the United Kingdom, for which members of the Colleges of Physicians are eligible, but licentiates ineligible.

THE activity of the Russian Red Cross Society, it is reported, is rapidly declining, and will quickly come to an end. The President (Count Levachow), Vice-President (Major-General Goremykine), and business-manager (M. S. Ralli) of the Central Committee have resigned their posts, their resignation marking the close of all serious operations. The contributions to the Society, as might be anticipated, have fallen off considerably.

MM. REGNARD and RICHER have applied the "graphic method" of M. Marey to the analysis and record of the epileptiform seizures of hysterical women, with the result of showing that even here, where disorderliness seems to be paramount, there is a more or less orderly series of phenomena. The interesting paper which embodies the results of their observations is to be found in the current issue of the *Revue Mensuelle de Médecine et de Chirurgie*.

WE regret to have to record the death of Dr. Steele, obstetric physician at the Liverpool Royal Infirmary, on the 9th inst., at his residence, Rodney-street, aged fifty-eight. The deceased gentleman had suffered for many years from renal disease.

THE *United Service Gazette* announces an outbreak of typhoid fever on board H.M.S. *Britannia*, the training ship of naval cadets moored off Dartmouth. As the *Britannia* is considered the most perfectly arranged school ship afloat, the occurrence is the more to be regretted.

REPORT
OF
The Lancet Sanitary Commission
ON THE
STATE OF THE RIVER THAMES.

No. I.

MORE than twenty years have now elapsed since the inhabitants of the metropolis, from the members of the Legislature downwards, were driven to loud, deep, and despairing exclamations of discomfort and disgust, in consequence of the noisome exhalations proceeding from a river that is the main source of the commercial wealth of our great metropolis. Legislators, men of science and of commerce, and persons of a humbler grade, who literally find their bread upon the waters, appealed through the Press for some remedy for an evil that, according to one or other of the writers, caused headache, nausea, and loss of appetite, and impelled such men as Michael Faraday to compare the river to a putrescent pond and a fermenting sewer. According to that witness, the appearance of the river-water on the 7th of July, 1855, was that "of an opaque pale-brown fluid," so thick that pieces of white card, when thrown into it from the deck of a steamboat, were undistinguishable before they had sunk an inch below the surface, and when the pieces fell edgeways "the lower part was hidden from sight before the upper part was under water." This happened at Paul's Wharf, Blackfriars Bridge, off the Temple, at Southwark Bridge, and at Hungerford (now the Charing-cross) Bridge. The secretary at the Lord Great Chamberlain's Office, House of Lords, wrote on the 16th of July, 1857, to Sir Benjamin Hall, then First Commissioner of Works, drawing his attention to "the pestilential state of the atmosphere at times in and about the new Houses of Parliament, owing to the evaporation of the sewage matter in the Thames on hot sunny days."..... "I fully expect," he continued, "from my own experience, that both the Speaker and Black Rod will find it impossible to occupy their new residences abutting on the river without serious derangement of health. The nuisance is becoming greater annually." And in July, 1858, a deputation from the Thames lightermen called upon the Lord Mayor to present a petition, describing the effluvium arising from the water in the docks, which appeared to them much worse than that from the river. After giving some particulars as to the general appearance of the water (samples of which were shown by the deputation), the memorial proceeded to state "that a man who fell into the London Docks a few days ago was found dead, although he had been in the water only two minutes, and had received no bodily injury, having been actually poisoned by the deadly properties of the water." This last statement must of course be taken for what it is worth, proceeding from an unscientific source, and ranking only as "hearsay" evidence. In 1858, during the sittings of the Committee appointed by Parliament to inquire into the matter, the stench proceeding from the river was so bad that, at least on one occasion, (July 9th) the windows of the room in which the proceedings were conducted had to be closed. Evidence collected by this House of Commons Committee, and also by some professional residents on board the old *Dreadnought* hospital-ship (as well as Dr. Barnes and Mr. Busk) showed that the banks and bed of the river were in some parts partially covered with innumerable quantities of red worms, which coloured the water and the mud on both sides of the stream, kept both mud and water in motion, and as they "fed, flourished, and died" there, emitted a most powerful and objectionable odour in July and August, whenever the heat

was at all great. These insanitary particulars (quoted for the most part from the Appendix to a Report recently issued by the Metropolitan Board of Works) show sufficiently that, on the score of health, abundant necessity then existed for some reform. The eventual result of this agitation was the passing of an Act which authorised the Metropolitan Board of Works to establish a system of drainage for the entire metropolis—i.e., from Fulham to East Ham on the north, and from Wandsworth to Plumstead on the south side of the Thames. These works, which were designed by Sir Joseph Bazalgette, were commenced in 1861, the northern system being completed in 1864, and the southern in 1866. The district north of the Thames consists, according to Mr. Edward Monson, C.E., of two distinct watersheds, connected together for drainage purposes, the first of which is drained by three large sewers, which collect and convey all sewage to Abbey Mills, where the contents of the low-level sewer are pumped up sufficiently high to be on a level with those of the others, and all are then conveyed to Barking outfall, a distance of four miles, within an embankment. The sewage is there stored in a large reservoir, and is discharged into the river at the commencement of the ebb tide.

It is important to remember that this sewage is mixed with all, or nearly all, the storm-water collected from the streets and buildings, together with a vast amount of animal ordure, street rubbish, and, as is asserted, a considerable quantity of iron and steel from horses' hoofs, cart-wheels, &c.; the amount and quality must greatly vary, though of course the sewage proper is easily calculated by crediting so much to each head of population. There are, however, certain points at which storm overflows are provided, and which act as safety-valves in cases of unusual storms, and discharge their contents into the river. There are about thirty-six of these storm outfalls on the north, and fifteen on the south side of the river. With these exceptions, and some small closet outfalls, many of which have been closed lately at the instance of the port sanitary authority, it is presumed that no outfalls of sewage now exist between Chiswick and Crossness. But Teddington, Kingston, Twickenham, Richmond, Isleworth, Brentford, and Barnes still defile the upland stream, and of course the lower watercourse as well. Below Crossness, the districts of Barking, Rainham, Romford, Erith, Grays Thurrock, Dartford, Northfleet, Gravesend, and Chadwell, all assist to swell the foul deluge caused by the metropolitan outfalls at Barking and Crossness. And, as if to add insult to injury, the West Kent drainage authorities have recently obtained an Act that will enable them to discharge the sewage of a great part of the county of Kent into the river just below Dartford creek, on the condition that the matter discharged shall be entitled to rank as "effluent water" only—a term that, up to the present time, has admitted of a very liberal interpretation. But a farm has been bought for irrigation purposes, and so, before condemning, it is proper to wait and see of what the West Kent "effluent" will consist. Meanwhile we are confronted with the fact that the sewage of a population numbering about four millions of persons, living within an area of rather less than a hundred and twenty square miles, is discharged into the Thames between Ware Point and Jenningtree Point, the distance between them being rather more than two miles. During the past three or four years at least the Thames Conservators and the Metropolitan Board of Works have been at issue as to the effect of these outfalls on the bed, sides, and channel of the river, not only at the points of discharge of the sewage, but very far above—as far, indeed, as Chelsea, or even Chiswick and Richmond.

In discussing the influences, past and present, that have affected the rise and flow of the tidal as well as the upland currents, consideration must of course be had to the embankments. These great works, recommended in principle as long ago as 1666 by Sir Christopher Wren and others, were actually commenced in November of 1862 on the northern and in 1866 on the southern side. It is not our province in this article to review in detail the changes that have taken place in consequence of thus diminishing the area over which the upland waters, with the sewage of the upland towns, pass and find their way to the sea. The same influences are of course at work as regards the tidal waters, and it is mainly these latter to which we must call the attention of our readers. For some little time after the main drainage scheme was completed and the works in operation, all went well. Those interested, either as living on the water, working on it, travelling on it, or residing in the riparian districts, with one consent agreed that things were improved, and that this improvement included the condition of the water in the various docks. But during the past two or three years the attention of the Conservators was directed by their officers to the fact (as by them asserted) that the bed of the river in the neighbourhood of the Barking and Crossness outfalls was gradually silting up, and so interrupting the navigation, as to which the Conservators are specially responsible. It is to be remarked, *en passant*, that the Metropolis Local Management Amendment Act of 1858 (21st and 22nd Vic., cap. 104) contains three sections, all in effect directly protecting the river, or designed to protect it, from sewage sent into it in such a manner or in such a state as either to create a nuisance or to obstruct the navigation. But neither in the principal Act, constituting the Metropolitan Board of Works, nor that authorising the construction of the main drainage system, nor in those smaller Acts on the same question that have passed from time to time, is any adequate protection afforded tending practically to prevent sewage proper, with its solid as well as its liquid constituents, from being discharged into the Thames at the good will and pleasure of the Metropolitan Board of Works. This being the case, no attempt has as yet been made either to separate the storm-water from the sewage, or the solid from the fluid contents of the latter, but all and everything *en masse* is sent down to Barking on the northern and to Crossness on the southern side of the river, and poured into the stream at the beginning of the ebb tide. The Barking sluices are open twice a day just after high water at each tide, and these at Crossness at half-water for two hours and forty minutes. The latest important asseveration of the Board of Works is to the effect that none of the sewage finds its way up the river beyond the site of the outfalls, this being chiefly grounded upon the fact that the ebb are stronger than the flood tides. The testimony of those connected with the upper docks communicating with the river is to the effect that, since the completion of the main drainage system the quality of the water has been unquestionably better. Notwithstanding certain statements put forth by Captain Calver on behalf of the Conservators, it appears that the capacity of the channel between Barking and Crossness has increased since 1861, the metropolitan outfalls having been opened since about the year 1863; and it seems that, in spite of almost continuous dredging, there has been a constant tendency to silting up off and about Woolwich since 1808, long before the main drainage system was thought of. Attention is also called to the fact that near that part of the river the Gas Light and Coke Company have erected a long pier not more than 500 yards above the northern outfall, which projects considerably into the tideway, and which, according to the opinions of Sir John Hawkshaw and Mr. Biddle, would cause a deposit to take place in that part of the river. It is also an acknowledged fact that where the bottom soil of a river "consists of light and inadhesive materials the permanent direction of their movement is downward." They are, in fact, very much more under the control of the ebb than the flood tide, so that, in the same sort of way as the tendency of all diseases is towards recovery, so the tendency of the contents of all streams (solid contents as well as fluid) is to find their way to the sea. But this principle must not be applied too generally to sewage mud, although it sometimes consists of light and inadhesive materials. The Board of Works' report concludes by asserting that sewage mud and Thames mud have no properties in common, that therefore Thames mud cannot be derived from sewage, and that the present muddy condition of the river is caused principally by the unprotected state of its banks, which in many parts are being rapidly washed away, and which are the result of a neglect of the duty which legislation has cast upon the Thames Conservators.

Thus much as to the optimist view of the question. Let us turn now to the pessimist, represented by the recorded opinions of the Conservators (or rather those of their skilled agents appointed to investigate the matter) and by other facts gleaned from time to time. And, first, as to evidence recorded by the Port Sanitary Authority, who, as one of our contemporaries remarks, "ought by this time to have formed an opinion." The half-yearly reports presented by the Port Sanitary Committee to the Corporation of London say very little on the subject. But the general tendency of the remarks made is to the effect that the outfalls should be regarded as, and undoubtedly are, a nuisance, and as such would have been attacked by the medical officer of health,

who has already caused to be closed many small closet outfalls between London-bridge and Woolwich by preferring written requests to the various wateraide authorities. But the Barking and Crossness outfalls, and indeed any others that might in the future be made by the Board of Works, are specially protected by Section 336 of the Public Health Act of 1875, so that remonstrance would be useless.[1] We have, moreover, the registered complaints of pilots, watermen, and others who are constantly up and down the river, that the smells, off Crossness particularly, are sometimes disgustingly bad, especially during the summer months. The Port Medical Officer intimates, indeed, that, taking the outfalls and the riparian factories together, and the vile odours arising from both, it is fortunate that the parts of the river in the immediate vicinity are not made use of to any great extent as an anchorage ground for vessels. The time, however, must soon arrive when these reaches will be so used, and the sanitary authority will then be neglecting a manifest duty if they fail to use all legal and other means to force the Board of Works to take the sewage elsewhere.

Some few items of evidence lately given before the coroner are worthy of notice. One (if not more) of the witnesses deposed to having observed a sort of hissing sound when he was in the water, caused by a vast quantity of air-bubbles which rose to the surface when the water and bed of the river were disturbed by the sudden sinking of the vessel and the immersion of her passengers. Several others also spoke emphatically as to the excessive nastiness of the water, both as to taste and smell, and there seems to be a consensus of opinion to the effect that the garments and skin of many of the corpses when brought to the surface, were covered with a sort of grey slime, quite unusual, of course, in ordinary cases of drowning. It is important also to note that the Gaslight and Coke Company have no outlets (properly so called) of any kind into the river at their Beckton works, except one which discharges from the latrine of the inspector's house; so that coal-gas may be eliminated from the question, except so far as it may find its way into the main drains, before their contents are discharged into the Thames.

Captain Calver, some eighteen months ago, was directed to report to the Corporation as to "the changes that have taken place in the bed of the river" since the main drainage system came into operation. Four months were occupied in pursuing these investigations, which included a study of analyses of the mud and water taken from various parts of the stream, the change in the channel, what are called the "limits of the oscillating sewage sections," the contents of the sewage sections, the cause of the deposit near the outfalls, the "accretion" in Woolwich Reach, the upper range of the sewage, the sewage and river currents, &c. The conclusions arrived at were that foul accretions have collected in the Thames in the immediate neighbourhood of the outfalls, and that they have formed since the outfalls came into operation. It is, moreover, asserted that "careful analyses show a perfect identity to exist between the constituents of the recently formed mud and those of the metropolitan sewage," and that "a material portion of these accumulations are in the immediate neighbourhood of the metropolitan sewage outfalls, and that they have been formed since the outfalls came into operation." There are also other items of evidence, of equal if not superior importance. Captain Charles Henry James, who has filled the office of harbour master in the port of London for no less than thirty-eight years, laid the following report before the Corporation of London in December, 1856:—

"4th December, 1856.

"I beg most respectfully to call your attention to a report that the Metropolitan Board of Works have it in contemplation to cause the outfall of the sewage of London, &c., to be discharged into the River Thames at, or near to Erith Reach, and I have to submit that if the same should be carried out as contemplated, not only will it cause extensive and dangerous embankments to form in that shoal water reach, but it will be detrimental to the health of seamen and other persons connected with colliers in sections, and vessels lying at anchor, and I apprehend that if this system should be adopted the present sections for colliers, No. 4, 5, 6, 7, will be rendered unfit for the occupation of vessels remaining any length of time.—C. H. JAMES."

[1] Since this was in type, we learn from *The Times* that the Sanitary Committee have written to the Board, calling attention to the nuisance at Barking, and intimating that some measures should be adopted to remedy "the present evils consequent upon the state of the water near the sewage outfalls."

The condition of things prophesied in a letter written twenty-two years ago seems to be in process of speedy fulfilment—i.e., if the sum and substance of Captain Calver's report be correct. Among other curiously contradictory statements is one attempting to prove that the carrying power of the flood-stream is superior to that of the ebb—a fact, according to Captain Calver, very distinctly brought out in some analytical returns made for the Board in 1868 by the late Dr. Letheby, which show that the amount of solid matter in the flowing tide at Greenwich and London-bridge to be nearly 21 grains per gallon, while that in the ebb tide is only 8·2 grains. Captain James has also observed that during 1869 the "eel-shoots" (boats in which eels are kept when caught, until required in the market) were compelled to move from Erith (where they had been moored for more than eighty years) to Greenhithe, in consequence of the excessive foulness of the water. In 1870, again, they were obliged to go down lower, to Gravesend; and in 1872 to Holy Haven, in Canvey Island, where they are now moored during the winter months. But in the summer "they are obliged to take a cruise to Southend, or all their eels would die." Analogous evidence was given about three months ago before Mr. Frank Buckland and Mr. Walpole, the Fishery Commissioners, as to whitebait, flounders, and other small fish caught in great numbers in the Thames. Fishermen are still alive who remember the time when these fish were caught regularly off Greenwich, and even as high as Limehouse; but the great majority of these small fry have gradually retreated to the estuaries of the Thames, the Medway, the Crouch, and the Blackwater, and are not usually caught now higher than Leigh, and this in spite of an odd and, as we should think, unhappy chance creature that is now and then seen in the Pool, or even as high as Lambeth-bridge. Captain Calver, however, says that "since the lower outfalls have been in operation, the various London docks have had an increase of muddy deposit, thereby entailing upon the dock companies increased expense for the maintenance of depth." We have been at the pains to inquire particularly about this somewhat dictatorial statement, and find, on the authority of several of the dockyard officials, that as regards the London and St. Katherine (the uppermost of the series) Docks, the water is "unquestionably better"; that as to the Millwall, there is "less mud than formerly in the neighbourhood of the entrance"; that, as regards the East and West India Docks (including the South West India Docks, formerly called the City Canal), there "has been no perceptible change"; and as regards the Victoria, the lowest of the series, there is also no change, though in this case there are extraneous causes at work other than the drainage and embankment schemes that would here affect the condition of the water. In point of fact, the statements contained in the two reports published severally by the Metropolitan Board of Works and the Thames Conservators are so conflicting that it is impossible to deduce therefrom any reasonable or decisive conclusion. And this chiefly because they each and both attempt to prove too much. Having endeavoured, therefore, to summarise what has been said and done up to the present time on the general question, we shall, in taking the sanitary aspect of the matter in hand, endeavour to hit the *juste milieu*, stating facts only, and drawing our own deductions. For as there appears to be an impending struggle between the sewage and the nautical authorities, it should be the province of Hygeia to indicate in a scientific as well as in a practical way how to include (instead of, as now, specially excluding) the Thames in the provisions of the Rivers Pollution Act, and, at the same time, too, to dispose of the sewage of this great metropolis in such a way as to avoid danger to the health of the floating, as well as the shore, population, to avoid any detriment to the river as a navigable channel abutting on the richest commercial city in the world, and to utilise our manurial refuse so that, without casting it upon the waters, we may find it (or, at all events, its equivalent) after many days.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—Mr. A. R. Anderson, B.A., Magdalen College, Oxford, has obtained the scholarship of £130 for students under twenty-five years of age; Mr. P. Frankland and Mr. J. Berry (who were equal and will receive the amount in certain proportions to be decided by the committee) that of £130 for students under twenty years of age; and Mr. A. Shadwell, B.A., Keble College, Oxford, that of £50.

THE NEW HOSPITAL AT MENILMONTANT, PARIS.

THE latest, and certainly the most perfect of the Parisian hospitals, is situated in the extreme east of the city, on high ground immediately behind the cemetery of Père la Chaise. Its situation is all that could be desired, and the building, although open to criticism upon many points, is admittedly one of the most elaborate extant for the reception of the sick. It is built in pavilions, and in some broad features resembles the Lariboisière and the Hôtel Dieu, but in detail and arrangement it offers wide departures from these models. The accommodation is for 630 patients in ordinary times, but during periods of epidemic or when other circumstances cause a great demand on hospital space, room could be found, without any undue amount of crowding, for 850 patients. The space occupied by the entire range of buildings is six hectares, or, as nearly as possible, fifteen acres. Thus we have forty-two patients to each acre of area—a proportion which ought to satisfy the most punctilious sanitarian, for the space allotted to each patient is more than twice as great as that which is considered requisite by the foremost British authorities.

The four main pavilions run from north-east to south-west. The two centre pavilions form, with the administrative block, the chapel, and the baths, a quadrangle enclosing a cour d'honneur. This court is about 220 feet square, and its centre is occupied by a garden tastefully arranged. This central court is flanked on either side by a smaller court, also occupied by a garden, the dimensions of which are about 220 by 150 feet. Thus the four pavilions form three courts, and all the wards in the building run from N.E. to S.W. The pavilions themselves are four storeys high, and they are entirely devoted to the accommodation of the sick, but the upper storey, which is less lofty than the others, is only intended to be used while the lower wards are being cleaned, or during periods of emergency. Each pavilion has a wide, almost palatial, staircase at each end, so that to the four pavilions there are eight main staircases, or one main staircase to about every eighty patients—a liberal allowance of staircase, for if, as with us, the average stay of a patient in hospital be twenty-one days, it follows that 3·8 patients will ascend and as many will descend each of these staircases per diem. In addition to these staircases there are lifts (one to each pavilion) and staircases for service (one to each pavilion), so that it seems to us that there has been a useless expenditure of space and money in the matter of staircases. In making this statement we must remind the reader that there is to be no clinic at the new hospital, and that there is therefore no necessity to provide for the passage, up and down, of crowds of students. Each floor of each pavilion is occupied by two wards, each ward has its big staircase at one end, and in the centre of the pavilion is the area set aside for the service of the two wards. This is a good arrangement, in so far as it allows of economy in the matter of supervision, one sister being able to control two wards of twenty-two patients each. The wards are 27 ft. wide, 70 ft. long, and 19 ft. high, and they each contain twenty-two beds. Thus each bed has allotted to it about 1600 cubic feet of space, but since the height of the wards is very great it follows that the area allotted to each patient is only a little more than 80 square feet. This is too little, according to our notions, and we have no hesitation in saying that in such a hospital as that at Menilmontant the area allotted to each bed should have been at least half as much again. It will be readily conceded that from the patient's point of view the area allotted to him in-doors is much more important than that available for his use out of doors. Here we have, to speak roughly, about 600 patients on fifteen acres of land, which means that nearly 1000 square feet of area is available for each patient. The architect has so contrived his buildings that each patient in winter will be cooped up in an area of 10 ft. by 8 ft., and will look mayhap through a closed window upon the remaining 920 square feet of area which, upon paper, are considered available for his benefit. Recreation courts and pretty gardens are charming things, and very useful from a hygienic point of view, but it must be remembered that in a large general hospital not more than 10 per cent. of the patients are able to be out of doors, so that at Menilmontant we may calculate that garden accommodation for sixty-three patients is all that is necessary, half for men and half for women. Any attempt to combine a convalescent hospital with a general hospital is useless, for the convalescent patient who benefits by sitting in a garden during the day will retrograde at night when he is shut in with twenty-one other patients, the majority of whom are acutely ill. These enormous gardens, by separating the various parts of the building, increase the trouble and expense of management. They afford great scope for the artistic proclivities of the architect and the gardener, but we cannot admit their necessity, and from the point of view of management and control we greatly doubt their desirability.

The wards have slightly-domed ceilings, and the four corners are rounded off. The floor is of polished oak, and there are no ledges above the doors upon which dust can lodge. Thus much has been done to insure the constant cleanliness of the wards; but, for some unaccountable reason, the skirting boards are of painted deal, presenting a horizontal ledge, and so badly fitted and finished that dust must accumulate upon and behind them. The windows do not reach completely to the ceiling, neither do they descend completely to the floor. They are in three sections, the upper and lower of which are intended to be opened when necessary. The upper section is rounded, and does not open as it should. Between each of the windows are two openings for air, the upper being for the entrance of fresh air, and the lower one for the exit of foul air. Both of these openings are in connexion with the warming and ventilating apparatus. There are four hot-water caloriféres in each ward. The beds are provided with curtains, and so also are the windows. Bed-curtains are indefensible, and all window blinds in a hospital should be outside and not inside.

In the middle of each pavilion is the space set aside for the service of the two wards. The middle of this space, which has an area of about 1200 square feet, is occupied by a passage some ten feet wide. On one side of this passage are (*a*) a small room for the sister, and (*b*) a dayroom, or *salle de réunion* for the patients. On the left is an *escalier de service*, a narrow wooden staircase running from basement to attics, and round this staircase there is constructed a ward kitchen and a bathroom containing one bath for emergencies. Here also, and built against the staircase, are dust-shoots and dirty linen-shoots. Beyond the ward kitchen we have the lift going from basement to attic, and round the lift are the waterclosets and urinals. The whole of these offices have windows on one side only, and when these are open a charge of watercloset-air will be delivered almost into the wards every time that the door is opened.

The watercloset turret, the cross ventilation of closets and bath-rooms, and their approach by means of ventilated lobbies, are arrangements which have been adopted in England and found to succeed. The French have yet to learn the advantages of them. The very great disadvantage, and the possible danger, arising from staircases and lifts which place every part of a building in direct air-communication with every other part, have only to be pointed out. It would have been advisable also to have placed a lobby provided with cross-ventilation between the two wards. As it is, the air of one ward will drift into the other, and the air of both will wander up or down the staircases, lifts, and shoots, and go whithersoever it listeth, for nothing has been done to prevent it. Going completely round the main quadrangle is a corridor reaching to the level of the first floor, and there are also open corridors stretching between the ends of the central and lateral pavilions. Every part of the building, in short, is connected by a covered corridor. The front part of the main quadrangle is occupied by the apartments of the administrative staff, and the rooms for the reception of patients. The back part of this quadrangle is occupied by the chapel—a most elegant building—which is flanked on either side by a one-storeyed building, devoted to baths of every description, for the use of both sexes. Behind the chapel is a large building exclusively devoted to the requirements of the religious sisterhood to which is entrusted the nursing, and in this building also is the linenry of the hospital. This nurses' home forms three sides of a square and encloses a private garden for the sisters.

Flanking the nurses' home on either side are two buildings, that on the west being the kitchen, and that to the eastward being the pharmacy. The arrangement of both

these departments is exquisitely complete. Steam and gas are largely used in the kitchen. The coppers for boiling are all arranged in a circle; and for the management of temperature, and the facility of cleansing and emptying, they seem to us to be perfect. The kitchens at the Hôtel Dieu, and also at Menilmontant, deserve to be visited by all who are interested in hospital management and construction.

A subterranean passage runs under every part of the hospital. It is provided with a tramway, and it serves for the conveyance of all food, drugs, fuel, and other articles. By means of this subterranean tramway, and the four hydraulic lifts, the service of this huge building becomes a tolerably simple matter, notwithstanding that the underground passage has a total length of something like half a mile. With an underground passage, and vertical shafts running from it to every floor of every pavilion, it is obvious that no true isolation can exist, and that potentially the air from wards, kitchen, dispensary, and dead-house is freely mixed in the underground passage to be rebreathed after undergoing more or less dilution.

The warming and ventilation of the building is effected in a manner exactly similar to that in use at the Hôtel Dieu. Fresh air is drawn in by means of a fan, and is then driven through pipes to every room in the building. The foul air is extracted by means of pipes which find an exit in a turret on the roof of each pavilion, which is heated by means of a hot-water coil. The air which is supplied to the wards can be warmed in winter. It is not a little remarkable that the intake for the fresh air is on the ground, and built against a wall which separates the area occupied by the main building of the hospital from a small special hospital designed to receive *infectious cases*. The intake of fresh air should have been far removed from all sources of impurity, and it is scarcely credible that the position chosen for it should have been deliberately fixed upon.

In addition to the main building there are some small subsidiary buildings. To the westward is the hospital for infectious cases already alluded to, and the stables, and to the eastward is a small lying-in hospital and a dead-house. The infectious hospital offers nothing worthy of remark, except that its service is entirely distinct from the rest of the building, and its position is, we think, dangerously close to the "fresh" air intake.

The lying-in hospital is an interesting structure, designed for sixteen women. It is a two-storey building, and on each floor are eight rooms, opening upon an open corridor. It is impossible to get from one room of this building to another without going through the open air. This is a sound principle, and one which we should like to see more rigorously carried out in general hospitals. Each of these lying-in chambers has its walls and floor composed of concrete, which bears a smooth polish, and immediately after an accouchement the whole apartment is thoroughly cleansed and aired. Each room has its own water-supply, and the service of this little establishment is quite independent of that of the main building. This lying-in hospital is of so good a design that we cannot but regret its situation, which is none of the best, for it is only some thirty feet from the main building of the hospital on the one hand, and about twice that distance from the dead-house on the other. To place a very carefully designed lying-in hospital exactly between two varieties of miasm seems like an experiment.

The dead-house calls for no remark. It occupies the extreme east of the area upon which the hospital stands, and is connected with the main building by means of a subterranean passage. The dead are to be removed from the wards by means of the lifts, and will then be transported to the mortuary by the tramways in the tunnel.

SESSIONAL HOSPITAL DINNERS.

ST. BARTHOLOMEW'S.

THE annual dinner of old students of St. Bartholomew's Hospital took place on the 1st inst, in the Great Hall of that ancient institution, and was very numerously attended. The chair was taken by Dr. William Odling, F.R.S., a former lecturer in chemistry at the school, and one of its most distinguished teachers, he having left Guy's to join her Royal rival across the water. The visitors included Sir Sydney H. Waterlow, Bart., M.P., Treasurer to the Hospital; Dr. Carpenter, F.R.S., Professor Abel, F.R.S., chief of the Government Staff of Chemistry at the Royal Arsenal, Woolwich; Viscount do Rio Branes, and his son, Chevalier da Silva Paranos; Mr. T. Madden Stone, the veteran officer of the College of Surgeons, and Mr. Trimmer, its secretary; and many more. Thanks to the admirable administrative arrangements of Dr. Church and Mr. Langton, an excellently-ordered dinner preceded a well-arranged list of toasts, the speeches by which they were prefaced being of the quality for which St. Bartholomew's has been famous for many generations of teachers and students.

ST. GEORGE'S HOSPITAL.

THE annual dinner of St. George's Hospital took place at Willis's Rooms, and was a most successful meeting, upwards of 100 guests putting in an appearance, amongst whom were many of the leading members of the profession. Mr. Holmes was in the chair, and the dinner was enlivened by the band of the 1st Life Guards, kindly lent for the occasion. After the usual loyal toasts were duly honoured came the toast of the evening, "St. George's Hospital," and in quick succession the board and staff had full justice paid to their merits. Opportunity was taken to allude to the recovery of Dr. J. W. Ogle from severe illness, and his name was received in the most hearty way.—Dr. J. W. Ogle then gave the "Past Students of St. George's," who composed a large majority of the company, and coupled with this toast the names of Mr. Frank Buckland and Mr. G. Yeates Hunter, of the Bombay Army. The latter gentleman, who had just returned from Cyprus, returned thanks, and, amongst other remarks, alluded to the disadvantages foreign service entailed of separation from old college friends, and disconnexion from such a worthy *alma mater* as St. George's.—Mr. Brudenell Carter proposed the "Health of the Chairman," who replied in the effective manner which marked the whole of his conduct in the chair. The dinner was a most pleasant and genial gathering of old friends and new aspirants to the honour of fighting under the banner of St. George.

MIDDLESEX HOSPITAL.

THE past and present students of this hospital and their friends dined together at St. James's Hall on the 1st inst., Mr. G. Critchett in the chair. There was a large attendance, and the success of the evening as a social gathering was greatly enhanced by the performance of the "Middlesex Minstrels," under the able guidance of Mr. Anderson Critchett and Herr Ganz. The chief part of their programme consisted of a selection from Messrs. Sullivan and Gilbert's popular "H.M.S. *Pinafore*," in the rendering of which Dr. Lavies, Messrs. Trelawny Cobham, C. S. Tomes, G. A. Crichett, and many others, ably assisted. After the usual loyal toasts had been drunk, the Chairman proposed the toast of "The Middlesex Hospital," to which Mr. A. H. Ross, the chairman of the Weekly Board, responded. Sir Lionel Pilkington proposed "The Middlesex Hospital Medical College," coupling it with the name of Dr. Headlam Greenhow, F.R.S. Several other toasts followed—that of "The Students" being replied to by Mr. Chaldecott and Mr. J. T. James on behalf of old and present students respectively; and the proceedings lasted until a late hour.

ST. THOMAS'S.

THE annual dinner of old students of St. Thomas's was held on October 1st at the Pall Mall Restaurant. Over a hundred old students were present. The chair was taken by Mr. Spencer Wells, who was supported by Dr. Risdon Bennett, Dr. Barker, Dr. Carpenter, Dr. Sedgwick, Mr. Le Gros Clark, and many others. The dinner was highly successful, and reference was made to the prosperous state of the School and Hospital.

THE STUDY OF MIDWIFERY.

To the Editor of THE LANCET.

SIR,—In your leading article this week on "The Introductories," you state that "Dr. Edis, at Middlesex Hospital, expounded the necessity for greater attention to the study of midwifery, and, of course, glorified the specialty."

My object in directing the students' attention to the sub-

ject at all was not with the view of magnifying mine office and exalting the special branch which I happen to represent, but because, as you so aptly put it, "there are so many overwhelming reasons why this branch of art cannot be made an exclusive specialty, but must always form part of general practice."

Adopting this view of the question, I attempted to show that, "education, according to Paley, comprising every preparation that is made in our youth for the sequel of our lives," it becomes a serious question whether some important measure ought not at once to be adopted in order to remedy the glaring defect in the present system of education as regards midwifery in its most extended sense, including diseases of women and children.

The theoretical instruction given is far too scant, considering the importance of the subject in the daily routine of general practice, and the opportunities for acquiring a practical knowledge of operative midwifery are almost *nil* as regards the bulk of medical students.

I am, Sir, yours faithfully,

Wimpole-street, Oct. 7th, 1878. ARTHUR W. EDIS.

CARBOLIC ACID IN SMALL-POX.

To the Editor of THE LANCET.

SIR,—The discussion on this subject has tended to prove :—

1. The comparative failure of the diluted acid, in aborting the eruption of small-pox.

2. The need of further investigation in this direction.

I hope they will be undertaken by those who have the opportunity, as it is pretty certain that very good results may be attained.

It may be well to point out that nitric acid, used as I have suggested, causes no eschar, and therefore no cicatrix. With the single exception of not producing local anæsthesia, its action is the same as that of carbolic acid. When applied to the sound skin, it kills the cuticle only.

I am, Sir, yours truly,

Lynn, October 8th, 1878. JOHN LOWE.

MANCHESTER.

(From our own Correspondent.)

THE Medical Board of the Manchester Infirmary have recently decided to admit the students to their weekly consultations, after the custom adopted at St. Bartholomew's. The first open consultation was held in the theatre last Thursday, when several of the senior students availed themselves of the opportunity thus afforded of hearing the cases discussed by the different members of the honorary staff. The case is first briefly commented upon by the surgeon or assistant-surgeon introducing it; then questions are put by any member of the staff, and afterwards, the patient having left the room, the opinions of the members present are taken, beginning with the junior, and passing to the senior surgeon.

The first meeting of the Manchester Medical Society for the session '78–79 was held on Wednesday, Oct. 2nd, at the Owens College, when several interesting communications were made to a very large meeting. Dr. Dreschfeld showed a cerebral tumour removed from the brain of a boy of exceedingly rare and interesting character. The tumour, which was the size of an ordinary fist, had a central nucleus of dense bone embedded in a mass of gliomatous structure. Mr. Bradley showed a man whose tongue he had recently removed with scissors, after the method originally suggested and practised by Mr. Whitehead. He considered that, with "a good light, a good table, a good gag, and a good assistant," it was a perfectly simple and safe operation. Mr. Lund endorsed this statement, and, commenting on this and other like cases, gave it as his opinion that Mr. Whitehead's operation was by far the best yet introduced for removal of the tongue. Subsequently Dr. Ross interested the meeting with a demonstration of microscopic specimens, magnified and thrown on to a screen, illustrative of the anatomy and pathology of the spinal cord. The specimens, which were beautifully prepared, will form a lasting memorial of Dr. Ross's admirable labours as pathologist to the hospital, a post which he has now vacated in expectation of being elected assistant-physician to the Infirmary, which appointment may be confidently anticipated to take place in a week or two.

The students' annual dinner, which is, perhaps, chiefly remarkable for the absence of students, was held at the Queen's Hotel, on Friday, Oct. 4th, under the presidency of Dr. Gamgee. The evening was pleasantly enough spent, but under its present form its *raison d'être* is not easy to see, any more than that of the abandoned introductory lecture. This, at least, brought all the students together, and all their teachers, too. The present plan accomplishes neither one thing nor another, and it seems clear that if the custom is worth continuing there should be two dinners, one for the hospital and college staff, and one for the students. Probably the best plan of all would be for the Owens College to give a *soirée* or a *conversazione* on the opening of each winter session, which would be available for all the various departments of the College. As matters at present stand, a lecture is given introductory to the commencement of the session of the arts, science, and law departments, and another to the evening classes, while the large and important medical department is left in the cold. The fresh entries at the College are more numerous than they have ever hitherto been, but as the days of registration have not yet expired, I cannot give you the exact number.

Manchester, Oct. 8th, 1878.

THE PARIS EXHIBITION.

(From our Paris Correspondent.)

VIII.—THE BRITISH SECTION (CONTINUED).

THE Silicate Paint Company of Seel-street, Liverpool, have a very interesting show-case, in which they have exhibited specimens of their silicate paint, dry and ground in oil; silicate enamelling paint; silicate petrifying liquid for damp walls, and as a cheap washable internal decoration in lieu of wall paper; and silicate marine and antifouling paint, for use on board ship. On account of the hygienic aspects of this exhibit, it is right to notice its most striking features. Thus the silicate paint is not only remarkable for durability and brilliancy of colour, and its hardness or density, but also for its harmless character, as it is free from lead. It dries rapidly, and forms a polished surface which is said to resist atmospheric influences, the action of heat, and that of the various gases which discolour lead paint. It has no chemical action, and protects the wood or metals to which it is applied. The enamel paint is still more deserving of notice from a hygienic point of view, as, on account of its hardness and polish, it forms a porcelain-like surface, which renders it washable; and as it is impervious to water, it is useful against dampness of walls. Water hardens this paint instead of softening it. On account of these properties it may prove of great use for hospitals and public establishments as well as for private dwellings. Its other properties are those of the silicate paint, in addition to which it dispenses with a coat of varnish. The petrifying liquid is a very interesting article. It is an innocuous water paint, with the property of hardening in the air, and of sealing hermetically the pores of bricks, tiles, cement, and plaster, and thus rendering them impervious to moisture. It is shown in two forms. One is a paste of various colours which can be diluted with hot water; the other, a transparent liquid ready for use. This latter is especially employed for hardening and preserving soft stones or bricks without changing their colour. It also forms a durable wall-covering which may be used for colleges, hospitals, churches, &c., in lieu of common paint, and with the great sanitary advantage of forming a hard non-absorbent surface. It may, in like manner, be applied to brick and stone floors. The silica from which this liquid is prepared is stated to be obtained from a unique deposit supposed to be of volcanic origin.

Messrs. H. and T. Kirby and Co., of Oxford-street, London, have a most varied and extensive exhibit in an elegantly arranged show-case. Perhaps the most noticeable articles contained in it are their miniature dispensaries for medical practitioners. The portable cases have been contrived both to be carried easily on a journey and to allow practitioners to dispense at the same time that the patient is visited. Messrs.

Kirby and Co.'s miniature dispensaries, which are patented, and have been largely used since 1866, admirably realise both these desiderata. There is a large case called "The Doctor's Vade-Mecum," which contains one hundred and thirty officinal medicines, most of these being made up in proper doses, ready for administration. There are also medicine-cases for travellers and for family use, in which the medicines are all made up. The name and use of each medicine are fully expressed on the label, so as to avoid any risk from mistake or ignorance. All these cases are very elegant, and some have the form of a double duodecimal volume for a library. Amongst the pharmaceutical preparations exhibited by Messrs. Kirby and Co. are more particularly to be noticed their pil. phosphori mollis and their pil. ferri phosphati. This preparation contains phosphorus without oxidation, and presents an accurate dosage of the drug. The phosphorus being in solution by a process devised by Dr. Kirby before it is made into a pill mass, it is held in a state of mechanical mixture chemically unchanged. This constitutes an extremely minute division, and ensures solubility and rapid diffusion and assimilation. It is claimed by the manufacturers that since the introduction of this preparation of phosphorus—namely, since 1871—they have not had a single bad result reported from the use of their product. A very attractive article in the show case of Messrs. Kirby and Co. is their glycerols of various sorts, being a substitution of gelatine and glycerine for sugar and gum. This substitution is a very valuable one, as glycerine forms an excellent menstruum, and active fluid medicines can be thus given in a solid form. For throat affections these glycerols seem far superior to common lozenges. Their soft and jelly-like colour is pleasant to the eye, whilst they must be palatable and grateful in diseases of the mouth, tonsils, and throat. It is, moreover, claimed for them that they do not induce nausea or loss of appetite, or produce any other of the bad effects caused by the frequent use of common lozenges. Messrs. Kirby and Co. have also exhibited some very interesting samples of their pearl-coated pills. The materials employed for the coating are soluble, and resist the action of climate, whilst the pill substance retains its softness and solubility.

Obituary.

ROBERT WILLIS, M.D. ED., M.R.C.S. ENG.

OUR readers, especially those who, many years ago, were constant attendants in the library of the Royal College of Surgeons, will regret to hear of the death of the learned gentleman who was the first appointed custodian of that fine collection in Lincoln's-inn-fields. Dr. Willis died at his residence, Barnes, Surrey, on the 21st ult., at the ripe age of eighty years.

Dr. Willis was born in or near Edinburgh, and commenced the study of his profession in that city. He obtained the M.D. of Edinburgh in 1819, soon after which he came to London, and became a member of the College of Surgeons in 1823. He then commenced the practice of his profession in the neighbourhood of Russell-square; subsequently moving to Storey's-gate, Westminster. Not succeeding very well in practice, he was urged by the celebrated Abernethy to offer himself for the appointment of librarian to the Royal College of Surgeons, then about to be created, although the library had been gradually forming since 1801, at which time, and in succeeding years, presentations and bequests of books, often in considerable numbers, were made to the College; the Court of Assistants ultimately voting £100 per annum for purchases. In 1827 active steps were taken to render the library more generally useful, and, with this object, catalogues were prepared, and in three years as much as £6000 was expended on books. Dr. Willis was then appointed librarian, and in 1828 the library, then containing nearly 11,000 volumes, was thrown open to the members of the College, and all other persons engaged in the pursuit of natural science were freely admitted, and found in the new librarian an obliging and courteous officer. According to the last published report the collection now contains 36,611 volumes.

To Dr. Willis personally the library was of great value, as it enabled him to gratify an increasing taste for literature. His first published work was an English version of Rayer on the Diseases of the Skin, a subject which he thought at one time of adopting as a specialty, and on which he contributed articles to some of the journals. This brought him to the notice of an old member of the College and a constant attendant in the library, who asked him (for a valuable consideration) to write a work for him on skin diseases, with especial reference to the value of medicated baths in their treatment. The work duly appeared, and was liberally paid for. Being very favourably noticed in the press, he imprudently avowed himself the author, which lost him not only the friendship of the person alluded to, but also the commission to write another work on the same subject. Hard work began to tell on an otherwise good constitution, and a sharp attack of hæmoptysis warned him of the need of a discontinuance of much of his usual work. He recovered, however, and continued his duties some time longer at the College, but circumstances occurred which induced him in June, 1845, to resign his appointment, and after a short time he left Dover-street, and began practice at Barnes, which he continued till his death, aided by his son-in-law. His last work was on "Harvey and his Discoveries." In addition to his many published works and papers to the journals, he found time to edit the *London Medical Gazette*, but circumstances occurred which brought him into collision with the late Sir Benjamin Brodie, and other members of the Council of the College of Surgeons, necessitating his vacating the editorial chair or resigning his appointment. He chose the former.

The following is a list of some of the published works of Dr. Willis: Translation of Rayer on the Skin; Urinary Diseases and their Treatment; The Treatment of Stone in the Bladder by Medical and Mechanical Means; Elements of Physiology by Wagner, with copious Notes by Willis; The Decrease of Disease by the Progress of Civilisation, in conjunction with Dr. Marx, of Göttingen; The Works of William Harvey, with Life of the Author, for the Sydenham Society; On the Special Function of the Sudoriparous and Lymphatic Systems, their Vital Import, &c.; Nathan the Wise, a Dramatic Poem, from the German of G. E. Lessing; Benedict de Spinoza, his Life, Works, and Influence on European Opinion, &c.

Dr. Willis was a member of many learned and scientific societies both at home and abroad.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 3rd:—

Farrer, George Albert, Brighouse, Yorkshire.
Mantle, Alfred, Worcester.
Patterson, Geo. Henry, King's-road, Brighton.

The following gentlemen on the same day passed the Primary Professional Examination:—

Thomas Sheppard Dyson, Theodore Charles Evans, Charles John Lathbury, and Edward Montague Pearless, St. Bartholomew's Hospital; John Cookesley Heaven, Bristol; David John Rygate and Ronald Volckman, London Hospital; Joseph Pearce Burdett Wills, St. Mary's Hospital.

PROFESSOR HARKNESS, of Queen's College, Cork, died suddenly in Dublin last week.

MR. F. SUTTON, of Willingham district, Gainsborough Union, has been awarded the sum of £8 by the Local Government Board for efficient vaccination in his district (second time).

THE Health Committee of the Town Council of Sheffield, notwithstanding the remonstrances of the Local Government Board, adhere to their decision to appoint a medical officer of health at £300 per annum, with liberty to practice, instead of £600 per annum without.

THE mortality in London last week was at the annual rate of 19·8 per 1000. The deaths, which numbered 1355, included 4 from small-pox, 19 from measles, 34 from scarlet fever, 20 from diphtheria, 40 from whooping-cough, 28 from different forms of fever, and 45 from diarrhœa. To diseases of the respiratory organs, the fatality of which, as usual at this season, has lately shown a tendency to rise, 247 deaths were attributed, while 30 were referred to different forms of violence.

THE Newport (Isle of Wight) Town Council, having received a letter from the Local Government Board inquiring upon what grounds they had arrived at the conclusion that there was no necessity for the appointment of a public analyst, decided that a reply be given to the effect that their conclusion was based on the fact that, as to prosecutions under the Adulteration of Food and Drugs Act, the law had been rendered inoperative by the judges, who had decided that adulteration was not to the prejudice of the purchaser who purchased for the mere purpose of prosecuting the seller.

Medical Appointments.

ALLDEN, J. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Shirley Urban Sanitary District, at £50 per annum for three years, vice Winkfield, deceased.

ALLEN, E. H., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the No. 2 District of the Narberth Union, at £35 per annum and fees; and Medical Officer of Health for the No. 2 Sub-district of the Narberth Rural Sanitary District, at £10 per annum, vice Leslie, who has ceased to reside within the district.

ARMITAGE, W. H., L.R.C.P.Ed., L.F.P.S.G., has been reappointed Medical Officer of Health for the Over Darwen Urban Sanitary District, Lancashire, for three years.

BARHAM, H. F. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 1 District of the Hollingbourn Union, Kent, vice F. Barham, M.R.C.S.E., deceased.

BERRY, P. C., M.B., has been appointed Resident Medical Officer to the Eastern Dispensary, Bath, vice Maunsell, appointed Medical Officer for No. 2 District, Bath Union.

BINNS, W., L.R.C.P.Ed. & L.M., L.F.P.S.G., has been appointed Medical Officer and Public Vaccinator for the Bardfield District of the Dunmow Union, Essex, vice Vernon, resigned.

BRYDEN, R. J., M.R.C.S.E., L.S.A.L., has been appointed Junior Assistant House-Surgeon to the Sheffield Public Hospital and Dispensary.

CAMERON, J. A., M.D., C.M., has been appointed Medical Officer and Public Vaccinator for the Bawtry District of the Doncaster Union, vice Hebblethwaite, resigned.

CLAREMONT, C. C., jun., M.R.C.S., L.S.A.L., has been promoted to be Senior Assistant House-Surgeon to the Sheffield Public Hospital and Dispensary, vice Denton, resigned.

ELPHINSTONE, R., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 3 District of the Alton Union, at £90 per annum and fees; and Medical Officer of Health for the No. 3 Sub-district of the Alton Rural Sanitary District, at £20 per annum, vice Sheppard, resigned.

KILLINGWORTH, T. B., L.S.A.L., has been appointed Assistant-Surgeon to the City Provident Dispensary and Surgical Appliance Association.

LAWSON, R., M.B., C.M., has been appointed a Deputy Commissioner in Lunacy for Scotland, vice Stirbald, appointed a Commissioner.

LING, W. S., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Colchester Port Sanitary District, at 10s. 6d. for each case attended, for one year.

LISTER, J., M.B., F.R.C.S.E., has been appointed Surgeon Extraordinary to Her Majesty.

LONGBOTHAM, G., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Middlesbrough Union Workhouse.

MACDOUGALL, J. A., M.D., F.R.C.S.Ed., has been appointed a Consulting Surgeon to the Cumberland and Westmoreland Convalescent Institution, Silloth, vice Page, resigned.

MANBY, F. B., F.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Cannock Rural Sanitary District, at £100 per annum, for three years.

MATURIN, L., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Blessington, co. Wicklow, vice Given, resigned.

MATOU, G., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Monmouth Urban Sanitary District, at £25 per annum, for three years.

PORTER, J., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Fleetwood Urban Sanitary District, at £40 per annum, and for the Port Sanitary District, at £10 for one year.

RAVERTY, H., L.R.C.S.I., L.A.H.D., has been appointed Medical Officer, Public Vaccinator, &c., for the Rathmichael Division of the Bray and Rathmichael Dispensary District, Rathdown Union, at £110 per annum and fees, and £20 per annum as Medical Officer of Health.

SMALE, M. A., M.R.C.S., L.S.A.L., L.D.S., has been elected Surgeon-Dentist to the West London Hospital, Hammersmith.

STANILAND, S., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Bodenham District of the Leominster Union, vice Elliott, resigned.

TAYLOR, S., M.B. &c., has been appointed a Demonstrator of Anatomy at St. Thomas's Hospital.

TURNER, G. E. W., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Stockport District and the Workhouse of the Stockport Union, vice Downs, resigned.

WALLIS, J. M. A., M.B., L.R.C.P.Ed., has been appointed Superintendent of the Lancashire Lunatic Asylum, Whittingham, at £600 per annum, residence, &c., vice Holland, resigned.

WARD, J., M.D., has been appointed Medical Officer of Health for the Cockermouth Rural, and the Cockermouth, Keswick, and Workington Urban, Sanitary Districts, at £400 for one year, vice Fox, appointed to the Altrincham Rural Sanitary District combined with others.

WELLS, A. G., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon and Apothecary to the Essex and Colchester Hospital, vice Biggs, resigned.

WHITSON, J., M.D., F.F.P.S.G., has been reappointed an Extra Dispensary Surgeon to the Glasgow Royal Infirmary.

YELD, H. J., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Sunderland Urban Sanitary District, at £500 per annum, for five years.

YOUNG, J., M.R.C.S.E., L.S.A.L., of Narborough House, Leicestershire, has been appointed Medical Officer and Public Vaccinator to the Blaby Union and District, vice Beresford, deceased.

Births, Marriages, and Deaths.

BIRTHS.

COLLINS.—On the 20th ult., at Saxmundham, Suffolk, the wife of H. Aldy Collins, Esq., of a son.

FLETCHER.—On the 27th ult., at Earl Soham, the wife of George Fletcher, M.D., of a son.

HARRISON.—On the 9th inst., at Falland Lodge, College-road, Clifton, the wife of A. J. Harrison, M.B., M.R.C.S., J.P., of a daughter.

HOPKINS.—On the 4th inst., at Richmond-hill, the wife of Surgeon-Major Nathaniel Hopkins, Indian Medical Department, of a son.

MAURICE.—On the 3rd inst., at Marlborough, the wife of James Blake Maurice, M.D., of a daughter.

WALSH.—On the 3rd inst., at Clogheen, co. Tipperary, the wife of Richard Walsh, L.R.C.P.Ed., of a son.

WILSON.—On the 2nd inst., at Penistone, the wife of Arthur C. J. Wilson, M.R.C.S.E., of a daughter.

MARRIAGES.

AIKMAN—CAREY.—On the 3rd inst., at St. Martin's Church, Guernsey, by the Rev. Charles Robinson, M.A., John Aikman, Esq., M.D., eldest son of the Rev. J. Logan Aikman, D.D., to Alice Emily, younger daughter of the late De Vic Carey, Esq., of Le Vallon, Guernsey.

ROSSITER—RAWLINSON.—On the 25th ult., at Taunton, George Frederick Rossiter, M.B., to Elizabeth Jane, daughter of William Rawlinson, Esq.

DEATHS.

AYRTON.—On the 29th ult., at Olive Cottage, Wavertree Nook, Liverpool, Francis Ayrton, M.D., aged 51.

CASHMAN.—On the 4th inst., at Richmond-vale, Bootle, Liverpool, Dora, wife of Richard Uniacke Cashman, M.D., Army Medical Department.

COLQUHOUN.—On the 24th ult., at Anchorage, Bothwell, Hugh Colquhoun, M.D., aged 76.

CORSELLIS.—On the 27th ult., at Benson, Oxfordshire, Nicholas Cæsar Corsellis, M.R.C.S.E.

DE VITRÉ.—On the 4th inst., at The Elms, Lancaster, Edward Denis De Vitré, M.D., aged 72.

FARR.—On the 2nd inst., at Dunstable, Frederick Farr, M.R.C.S.E., aged 57.

GIVEN.—On the 5th inst., at Blessington, co. Wicklow, Marcus Given, L.K.Q.C.P.I., aged 27.

JEPHCOTT.—On the 29th ult., at Foregate-street, Chester, Samuel Thomas Jephcott, M.D., aged 50.

MASSEY.—On the 27th ult., at Tobercurry, co. Sligo, David Clements Massey, L.R.C.P.Ed., aged 29.

MENZIES.—On the 20th ult., at sea, between Cyprus and Malta, Robert Menzies, L.R.C.S.I., Surgeon-Major, Army Medical Department, aged 47.

RIX.—On the 1st inst., at St. Neots, Joseph Rix, M.D., aged 74.

ROBERTS.—On the 29th ult., at Southernhay, Exeter, Arthur Copleston Roberts, M.R.C.S.E., aged 30.

SHEARMAN.—On the 2nd inst., at his residence, Rotherham, Edward James Shearman, M.D., F.R.S.E., in his 81st year.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. J. Finlayson: A Clinical Manual for the Study of Medical Cases.
J. W. Thomas: Coal-mine Gases and Ventilation.
Dr. A. Gamgee: Human Physiology.
Dr. F. Eklund: Strictures of the Cervical Canal.
Dr. C. W. Dulles: Supra-pubic Lithotomy.
O. Jennings: Comparaison des Effets de Divers Traitements dans l'Hystérie.
G. W. Thomson: The Preservation of Health in Tropical Climates.
Cook's Handbook to the Health-Resorts of the Mediterranean.
Henry Ashby: Notes on Physiology.
Public Health (Ireland) Act, 1878.
A. Macalister: Invertebrata.
" " Vertebrata.
P. Magnus: Hydrostatics and Pneumatics.
W. R. McNab: Botany: Morphology.
" " Botany: Classification.
Cassell's Magazine of Art.
The Popular Science Review. October.
The Quarterly Journal of Microscopical Science. October.
The Westminster Review. October.
The Journal of Psychological Medicine. Vol. IV. Part II.

Notes, Short Comments, and Answers to Correspondents.

THE SANITARY INSTITUTE OF GREAT BRITAIN.

THE awards of the judges upon the exhibits were made known at this meeting. The judges were Professor Corfield, Dr. Dyke, Dr. Bartlett, Mr. Law, and Mr. Rogers Field. To Major Duncan, R.A., the Director of the Ambulance Department, was awarded a medal of the Institute for his exhibit of a wheeled ambulance litter, with a stretcher which is capable of being detached. This litter is a valuable contribution in aid of the wounded, and will serve to convey with comfort the injured in the field, in factories, in colliery districts, and on railways. It has been patented by the Order of St. John of Jerusalem in England.

Dr. Wickham Barnes.—The report was received too late for insertion.

THE REPORT OF THE COMMISSION APPOINTED TO INQUIRE INTO THE STATE OF THE ARMY MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Will you kindly allow me space to criticise a very important expression of opinion contained in the Report of the Committee appointed to inquire into the condition of the Army Medical Department?

The Commissioners, after quoting a statement that the ratio of medical men to the population of this country has decreased, attribute this decrease to the greater opportunities offered to young men in the colonies, the mercantile marine, &c., and also to the reduction in the number of persons entering the medical profession, in consequence, probably, of the opening of the British and Indian civil service to competition, and perhaps of the increasing attractions of the mercantile world.

Now, Sir, surely there is a fallacy lurking in the above far-fetched excuse, otherwise the civil population of the present day would also be much worse off for medical attendance than in past times, and the doctrine of Sir Wm. Muir and his fellow-Commissioners might lead to measures being taken to increase the already trying competition to which medical men in our larger towns are exposed, which competition, in spite of statistics, grows yearly worse and worse—i. e., from the struggling practitioner's point of view.

Where, I would ask, is the village which has kept up to its old standard of prosperity, and yet lost its doctor, from emigration or the "increasing attractions of the mercantile world"? Such a case is almost unknown. Certainly not one hamlet in twenty has suffered such a loss. But the candidates for the Army Medical Department have fallen off 300 per cent.! The key to estimating at their true value the statistics so ingeniously and pleasantly used by the War-Office Committee is to be constructed from the following explanatory facts:—(1) The population of the agricultural districts has been steadily flowing into the towns. (2) Railways and other improved modes of communication have made it possible for three doctors to attend to as many patients as four could manage in past times. (3) Families concentrated in towns require a much smaller number of medical men than when scattered in rural districts. (4) Hygiene has reduced the amount of sickness.

I think that everyone will confess that the subject of this letter is one which concerns the great body of medical practitioners quite as much as the army, and for that reason I beg to call general attention to it.

Yours obediently,

Manchester-street, W., Oct. 1878. CHARLES B. KEETLEY.

M.R.C.S.—The rule is a proper one which makes the surgeons of hospitals responsible for the treatment of out-patients as well as of in-patients. We see no question of *amour propre* in an assistant-surgeon respecting it

ORGANIC IMPURITIES IN ICE.

To the Editor of THE LANCET.

SIR,—It is a common practice with a great many people to add ice to ale, claret, lemonade, &c., during the warm months of the summer, to make these beverages more cooling. I do not believe that sufficient attention has been drawn to the seriousness of this practice.

A short time ago I had occasion to examine a sample of water, the source of which at the time was unknown to me. With nitrate of silver it became very slightly cloudy, and yielded with nitrate of baryta an almost imperceptible precipitate. Oxalate of ammonia produced a very slight turbidity. It was perfectly neutral, and possessed the ordinary qualities of good drinking-water. I was still puzzled to make out what the water could be. I thought it was not unlikely that it might have been distilled water put into a jar containing a little ordinary water. I then Nesslerised a sample, and was surprised to find that it yielded over 200 parts per million of free ammonia! I was afterwards told that it was melted ice, and I have no doubt that the ice itself was of the usual quality employed for domestic purposes. For manufacturing purposes and refrigerating mixtures this would not much matter; but, looking at the enormous quantities consumed during the summer months in beverages, it seems to me that some stringent steps should be taken to prevent the sale of such ice, even for preserving fish or any article of food.

Yours obediently,

THOMAS T. P. BRUCE WARREN,
Analytical Chemist to the India-rubber, Gutta-percha, and Telegraph Works' Company, Silvertown.

Kent-terrace, Upton, Essex Sept. 1878.

Dr. C. H. Robinson's paper on "Bulbar Paralysis" will appear in an early number.

Kisber.—Yes. Apply to the Board of Guardians.

EPIDEMIC DISEASE.

IN order to prevent the introduction of epidemic diseases into Ireland, more especially that of yellow fever, which has prevailed so extensively in New Orleans and other parts of America, the Local Government have recently issued a circular to the Boards of Guardians in Ireland, as the proper nuisance authorities for certain port nuisance districts on the coast, impressing upon them the responsibility of carrying out any regulations issued by the Board to prevent the introduction of infectious diseases, to arrest their spreading when introduced, and to provide promptly and permanently for the treatment of patients arriving in ships.

CASE OF UMBILICAL CORD AND HAND PRESENTATION; CHILD LIVING.

To the Editor of THE LANCET.

SIR,—About 2 P.M. on the 12th instant I was requested to visit Mrs. S——, aged thirty-six, a strong and healthy woman, in her twelfth confinement. The patient had been in labour since early morning, and the membranes had ruptured some hours previously; but the midwife who was in attendance informed me that the labour seemed to have made little or no progress for several hours, and also that the cord, foot or hand (she was not sure which) were also presenting. On examination I found the os pretty well dilated, and the umbilical cord well down in the vagina, and after a few pains the hand also presented, the pains being very weak, and a long interval between each. I resolved to at once give a dose of ergot of rye; shortly afterwards the pains became much stronger, the cord and hand pressing more down in the pelvis. I at once determined to turn the child. I immediately pushed the cord along with my hand into the uterus, and laid hold of the left foot, and after some difficulty succeeded in bringing it down. The head was detained at the outlet for a few minutes, but was quickly released. The child was asphyxiated for fully half an hour, but was finally brought round by the usual remedies applicable in such cases.

My object in recording the above case is because of the unusual frequency of presentations of this kind attended with so happy a termination, which was quite unexpected. I may mention that both mother and child (female) are doing well.

Yours &c.,

Glasgow, September, 1878. JAMES MULLAN, L.F.P.S.G.

S.—Our correspondent should forward the circular to the College from which the advertiser has his diploma. The profession of the neighbourhood should make a representation to the writer of the unprofessional nature of his circular.

TYPHOID FEVER IN ELDERLY SUBJECTS.

To the Editor of THE LANCET.

SIR,—I am enabled to answer completely the sceptical query of Mr. Kiernander as to the persistence of Peyer's patches and the occurrence of typhoid fever in elderly subjects. In October, 1874, I made a post-mortem examination on the body of a man, sixty-four years of age, whose case had been diagnosed as one of enteric fever during life, and who was under the care of Dr. Greenhow at the Middlesex Hospital. The abstract of the post-mortem record, given in the report of the medical registrar for the year, includes the following statement:—"Extensive ulceration of the ileum in the site of Peyer's patches (which were not, however, visible); largest just above ileo-cæcal valve. Some of ulcers contained adherent yellow sloughs; majority were bare, exposing muscular coat; one involved nearly the whole circumference of bowel. Mesenteric glands large and vascular. Spleen (eight ounces) soft."

I am, Sir, yours faithfully,

Nottingham-place, W., Oct. 5th, 1878. SIDNEY COUPLAND.

To the Editor of THE LANCET.

SIR,—I have just noticed in your issue of Sept. 28th some replies to a question concerning the occurrence of enteric fever in old age. Dr. Wood, of Ackworth, and myself attended a lady nearly seventy years of age in a case of this kind, one among others in a local epidemic. This, however, is not unique. But a case of enteric fever in a gentleman of eighty-three is, I believe, unique. Such was a case attended a few months ago by Mr. Ellerton, of Aberford, and myself. The patient, a hale country gentleman, went through the fever in a severe form, with all the usual symptoms. His convalescence was secured chiefly by the indomitable nursing of his children, who tended him in turns, and who compelled him to take nourishment and stimulants. Unfortunately when convalescent he died suddenly of diaphragmatic hernia.

Yours &c.,

Leeds, Oct. 6th, 1878. CLIFFORD ALLBUTT.

To the Editor of THE LANCET.

SIR,—During a large experience in the treatment of typhoid fever I have treated patients of nearly all ages; but one of the most typical and (in all its gradations) severe cases I have met with occurred in a patient aged seventy-eight. The early fever was acute, and later the diarrhœa and tympanites were severe; but, blessed with a hard constitution, my patient survived, and after a convalescence of some weeks expressed herself as feeling better than she had for some years previously. This case happened nearly four years since, and the patient still lives and enjoys good health.

Yours faithfully,

October 3rd, 1878. WM. BOWES.

LICHEN URTICATUS.

To the Editor of THE LANCET.

SIR,—Having now under my care a case of lichen urticatus, which has defied my utmost efforts to eradicate, I should be much obliged if any of your numerous readers who may have successfully treated such cases would kindly give me the benefit of their experience.

Yours &c.,

October 8th, 1878. E. W.

Mr. W. Rocerafft.—Pilocarpine is the alkaloid or active principle of jaborandi. It was, we believe, first prepared by Mr. Gerrard, of University College Hospital, and named pilocarpine from the name of the plant, the *Pilocarpus primatus*. The discovery of the alkaloid is also claimed for M. Ernest Hardy. Although not mentioned in the works consulted by our correspondent, he will find it referred to in Squire's Companion to the British Pharmacopœia (eleventh edition, 1877). For some of the earliest therapeutic experiments with the alkaloid made by Dr. Sydney Ringer, he may refer to our columns (THE LANCET, March 4th, 1876, p. 346), and mention has frequently been made of it in other communications. We believe that the drug may be obtained of any of the wholesale druggists; or of Mr. W. Martindale, New Cavendish-street.

THE paper of *Dr. T. Inglis* is marked for insertion.

PLACENTA PRÆVIA.

To the Editor of THE LANCET.

SIR,—The following case may be interesting to those who advocate Dr. Barnes's method in placental presentations.

E. C——, aged thirty-eight. Has had seven children; the last, thirteen months ago, was a breech presentation. One miscarriage at the third month. On Sept. 21st she, daily expecting, had a sudden discharge of blood, which as suddenly stopped. The following day, whilst shaking up a bed, she had another loss, very profuse, with many and large clots. From this time until I was sent for at 2.30 P.M. on the 23rd, there was a constant dribbling. She had had a few slight pains. On examination I found the os dilated to the size of a crown-piece, and protruding through it, to the left and lower side, was a lip-shaped portion of detached placenta, quite two inches in length; beyond this, and very high up, the head could be reached, presenting in the first position. The membranes, which were lax and baggy, I at once ruptured, and then, with my hand partially in the vagina, separated the placenta from the uterine wall as far as I could reach with my finger. I put on a binder, and gave three twenty-drop doses of Battley's solution of ergot at intervals of fifteen minutes. Within an hour of giving the first dose strong pains ensued, and the case went on naturally, although slowly. At 8 P.M., in consequence of the woman becoming a little worn out and restless, I gave forty drops of the sedative solution of opium, which lulled the patient to sleep. I then left the house for a couple of hours. On my return I found that the pains were coming on very rapidly. The child, a male, fully nine pounds in weight, was born close on twelve o'clock. The cord was twice around the child's neck. This circumstance probably prevented the case being complicated with prolapse of the funis. The after-birth followed immediately, with a loss of not more than a tablespoonful of blood. The uterus contracted firmly. On examining the placenta, the portion that had presented was, by its alteration in colour and consistence, clearly distinguished from the rest of the mass. The cord was inserted just above the junction of these parts. When last seen both mother and child were doing well.

I am, Sir, yours truly,

Cardiff, Oct. 1st, 1878. FRED. EVANS, M.B.

"BOOKS."

IN our notice of books in the Students' Number, Professor Foster and Mr. Langley's Course of Elementary Practical Physiology (Macmillan and Co.) was inadvertently omitted. If this little work be thoroughly mastered, the student will have laid the foundation of a sound knowledge of physiology.

SALT WATER IN SURGERY.

To the Editor of THE LANCET.

SIR,—Your issue of the 5th instant contains an annotation, drawing attention to the employment of salt water in surgery, and, from recent experience of the use of a solution of common salt in cases of ozæna, I can speak highly of the value of so simple a remedy. If ordinary tepid water be used to wash away the accumulated secretion in these troublesome cases, the patient almost invariably complains of great discomfort, sometimes amounting to actual pain, in the nasal passages and frontal sinuses, and frequently an acute catarrh is developed. These evils are apparently due to the specific gravity of water being below that of mucus, consequently osmosis takes place between the mucous membrane and the water, and this is followed by hyperæmia and catarrh. To obviate this inconvenience, it is sufficient to direct the patient to add three tablespoonfuls of salt to a pint of tepid water, and then to wash away the inspissated mucus, which is so apt to collect in the nasal passage, by means of Thudichum's douche. If the medical attendant sees to this himself, the posterior nasal syringe (an instrument highly recommended by Dr. Beard, the editor of Tobold's work on the Diseases of the Larynx) may be used with advantage. When the mucous membrane has been thoroughly cleansed, some astringent or alterative solution may be applied, either by means of the spray apparatus, which I ordinarily use, or with a syringe.

Faithfully yours,

Queen Anne-street, Oct. 9th, 1878. F. DE HAVILLAND HALL.

"FOOD PRODUCTS AT THE PARIS EXHIBITION."

To the Editor of THE LANCET.

SIR,—We observe in the Report on Food Products at the Paris Exhibition the name of "Vickers and Co." only appears. As there are *two* firms of that name, distillers, and wine, spirit, and cordial merchants, and as we not only exhibited at Paris, but were awarded the gold medal for our gins, we naturally wish it known that we are the firm referred to.

Yours faithfully,

JOS. AND JNO. VICKERS AND CO.

Victoria-street Distillery, Westminster, Oct. 7th, 1878.

A COMPLIMENT TO CITY GENTLEMEN BY ADVERTISING PRACTITIONERS.

THE following remarkable documents, one circular and two visiting-cards, have reached us. We are informed that they have been sent to "many gentlemen occupying positions in banking houses in London." They will not be flattered by the feature of his education to which Dr. William Fergusson gives special prominence on his visiting-card. It is a poor compliment either to his own professional qualifications or to those whose patronage he seeks:—

"Drs. Fergusson have the honor to inform you that they have arranged to continue the medical and surgical practice conducted for nearly twelve years by the late Mr. Brand, Surgeon, at this address.—23, Cornhill, E.C. (Change-alley)."

"Wm. Fergusson, M.D., F.R.C.S., formerly externe of the Venereal Hospitals of Paris and Vienna. At home 12 to 3.—23, Cornhill, E.C. (Change-alley)."

"R. A. Fergusson, M.D., L.R.C.P., L.R.C.S., L.S.A., Late Senior House-Surgeon, Glasgow Royal Infirmary. At home 11 to 4.—23, Cornhill."

Dr. Bennett, (Liverpool.)—Soon.

TWO DISLOCATIONS AND A FRACTURE IN THE SAME PATIENT.

To the Editor of THE LANCET.

SIR,—On the 25th July I was called to an accident in the neighbourhood, presenting a somewhat rare *collection*, and which may interest your readers.

My patient, a young man, nineteen years of age, had been thrown down by the falling of a large iron door. I found him lying on a couch, suffering from dislocation of the wrist, dislocation of the thigh, and fractured radius, all of the right side. Taking his hand in mine, with counter-extension at the elbow, a strong and sudden pull snapped the wrist into place. I rested the arm on a pillow, and, proceeding to the lower limb, directed powerful extension to the leg in a line across the opposite knee, fixing the pelvis with a jack-towel. When this had been continued during ten minutes, I looped my hands under the upper third of the thigh, and, lifting them strongly, felt the head of the bone grating into the acetabulum. Having tied his knees together, I again looked to the wrist, and found the radius fractured about an inch above its carpal extremity. The femur was dislocated on the dorsum ilii. The wrist dislocation is, I believe, somewhat rare. In busy practice I can recollect but one, ten years ago, in a girl about fourteen years of age, caused by a well-handle. My patient was walking about on the fourteenth day, and appears none the worse for the accident. He is a "total abstainer," and firmly declined stimulants offered him at the time of the accident and subsequent to the manipulation of reducing.

I am, Sir, yours faithfully,

F. DALTON, L.R.C.P.I., &c.

Newhaven, Sussex, Sept. 12th, 1878.

MOSQUITO BITES.

To the Editor of THE LANCET.

SIR,—Noticing a communication in your issue of Aug. 24th, recommending carbolic acid as an application to mosquito bites, I think I can, for the benefit of your foreign readers (as I apprehend mosquitoes are a rarity in Great Britain), recommend something better, and much more simple.

In this part of the world we have to fight the pests for at least three months every year. I myself suffer very much from the stings of these insects, or rather have suffered much until by chance I discovered a specific in soap-and-water, and for years during the mosquito season have slept with a bottle of strong liquor ammonia under my pillow, for the destroyers of rest manage to get inside a net occasionally, and commence operations immediately on the lights being extinguished. Liquor ammoniæ is good for rubbing into the part immediately after being stung. Coal oil and pennyroyal are used by some to drive the pests away; but on being stung, immediately on experiencing the intolerable itching, I apply a little soap, well rubbed in for a few moments, and then allow a stream of cold water to run from a tap on the part for three or four minutes. The itching is at once relieved, and no further annoyance results. In fact, as I know from experience, there is nothing that can at all compare with soap and water (plenty of the latter), and surely there is nothing so convenient.

I remain, Sir, yours truly,

CHARLES J. S. DIGGES, M.R.C.S.E., &c.

St. Louis, Mo., U.S.A., Sept. 22nd, 1878.

MORTALITY OF INFANTS.

To the Editor of THE LANCET.

SIR,—In common with the rest of the profession, I read with great satisfaction the able remarks made by Dr. Edis in his introductory address on the subjects of Puerperal Mortality and the Mortality of Infants. With regard to the latter subject, as I was the first to point out the enormous influence that the practice of farinaceous feeding exercised as a factor in keeping up the excessive mortality of infants, it was naturally peculiarly gratifying to me to find principles I had so long advocated meeting with such influential support. The profession appears to have gradually and quietly accepted the fact that starch-feeding is a fatal error, and I should be glad of your assistance in giving publicity, now that attention is once again brought to bear upon the subject, to that which is equally a fact—that "teething" is a bugbear, and ought to be erased from our list of diseases. So long as the profession and the public continue in the delusion that the physiological development of the teeth is a probable, possible, and frequent cause of illness and death, so long will the real cause be missed, unsought for, and unavoided, and so long will such deaths continue to swell the ghastly death-roll of infants.

I am, Sir, yours truly,

Town Malling, Kent, Oct. 8th, 1878. SELBY NORTON, M.D.

PARIS EXHIBITION.

A SILVER MEDAL has been awarded Messrs. Griffiths, Fletcher, and Burdon, of Liverpool and London, for their "Griffiths' Patent White," or substitute for white lead, that was brought before the International Congress of Hygiene in Paris by Dr. Phipson and Professor Lutschannig.

M.R.C.S., L.S.A.—The subject has already been discussed at sufficient length for the present. We see no new points in the letter to call for its insertion.

TEMPERATURE OF THE HUMAN BODY IN HOT CLIMATES.

To the Editor of THE LANCET.

SIR,—With regard to letters which have appeared in THE LANCET as to the temperature of the human body in tropical climates in health, I may state that during the last twelve months I have taken the morning and evening temperatures of many healthy Europeans, Coolies, Damaras, Kaffirs, and Hottentots, and have always found that the range of temperature did not vary much. It was mostly 98·1°, but may have sometimes reached 98·8°. The temperature at Port Nolloth, in Namaqualand, has often been as high as 115° in the shade. I noticed that the degree of heat of the atmosphere had no relation to the temperature of healthy adults, whether Europeans or native.

Yours truly,
GUSTAVUS F. PIRRIE,
District Surgeon, Namaqualand, South Africa.

Port Nolloth, Cape Colony, Aug. 12th, 1878.

TREATMENT OF ENLARGED GLANDS IN SCARLET FEVER.

To the Editor of THE LANCET.

SIR,—I have lately adopted a very simple method of preventing the great suffering which little patients sometimes have to undergo from enlarged glands in scarlet fever. The attendant is directed on the slightest indication of enlargement to rub gently into the neck every two hours by day and every four at night the linimentum ammoniæ, with a little tincture of opium added; each application to last ten or fifteen minutes; and, to ensure the necessary perseverance, warning is given of the probable serious consequences should the enlargement continue. I have recently had a large number of cases of scarlet fever, some of them severe; but I have had no enlarged glands. The friction obviously prevents the collection of morbid material in the gland and subsequent adenitis.

Yours obediently,
September, 1878. L.R.C.P. & S. Edin.

ERRATUM.—In the second paragraph, second column, on page 490 in our last number, for "*Mid-Surrey Advertiser*," read *Surrey Advertiser*.

COMMUNICATIONS not noticed in the current number shall receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Brown-Séquard, Paris; Dr. M. Mackenzie, London; Dr. Broadbent, London; Mr. Thos. Smith, London; Dr. de Havilland Hall, London; Mr. Keetley, London; Captain Bedford Pim, London; Lieut.-Colonel W. Hope, London; Mr. Beverley, Carlisle; Dr. Conry, Adelaide, South Africa; Dr. Cavafy, London; Mr. Palmer, Vienna; Mr. T. W. Jones, London; Mr. Bowes, Ipswich; Mr. Thomas, Birmingham; Dr. Wolfe, Glasgow; Mr. Grellet, Hitchin; Dr. Haughton, Dublin; Mr. Aston, London; Dr. Page, Netherfield; Mr. Clark, Hove; Mr. Godfrey, Freemantle; Mr. Cragie, London; Mr. Little, Jersey; Surgeon-Major Smith, Bristol; Mr. W. S. Byrne, London; Mr. Cole, Belfast; Mr. Inglis, Edinburgh; Mr. Gardner, Armagh; Mr. Bolton, Kustendjie; Dr. M'Murtog, Danville; Mr. Digges, St. Louis, U.S.A.; Dr. Gramshaw, Gravesend; Mr. Roocroft, Wigan; Dr. J. Y. Hunter, London; Mr. Hill, London; Mr. Phelps, Exeter; Mr. Sprout, Forest-gate; Dr. Allbutt, Leeds; Dr. Foote, Rotherham; Dr. Tatham; Mr. R. Tomlinson, Oundle; Dr. Alldin, Shirley; Mr. Walpurley, Salford; Dr. Harrison, Clifton; Mr. Young; Dr. Taylor; Mr. Sell; Mr. Ormsby; Mr. Claremont, Sheffield; Dr. J. Wickham Barnes; Mr. Beatton; Mr. Howard; Mr. Green; Dr. Ward; Mr. Wood; Mr. Holmes; Mr. Gray; Mr. Sutton, Gainsborough; Dr. Edis; Mr. Moore, Birmingham; Dr. Pickersgill; Dr. Allison, Bridlington; Dr. Waller, Bradford; Dr. Bennett, Liverpool; Mr. P. Shepherd; Mr. Falconer, Dublin; Dr. Morton, Glasgow; Dr. Lowe, Lynn; Dr. Norton, Town Malling; Dr. Smale; Dr. Bryden, Sheffield; Mr. Gribbon, Fyzabad; Dr. Gillespie; Mr. C. Jackson; Mr. Hartham; D. A. A.; M.R.C.S.; S. R. J.; Kisber; A Victim; R. A.; L.R.C.P.; Tria Juncta in Uno; R. C. S.; Curriculum; W. O.; E. W.; J. L. A.; F.R.C.P.; Willoe; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Thomas, Festiniog; Mr. Lewis, Birmingham; Mr. Collins, Saxmundham; Dr. Hebblethwaite, Bawtry; Dr. Sergeant, Camberwell; Mr. Duncan, Ashton-under-Lyne; Mr. Nutt; Mr. Jolly; Mr. Dennis; Mr. Steele; Dr. Sheppard, Litcham; Mr. Sutton; Mr. Baldwin; Mr. Jenkinson; Mr. Kidd; Mr. Gibbs; Dr. Applebe, Weobly; Practitioner; Medicus, Margate; M.D., Newbiggin; Delta, Dublin; W., Canterbury; H., St. Austell; J. T. B., Newton-Stewart; G., Walworth; Medicus, Huddersfield; Locum Tenens; Medicus, Kilburn; A. B. C. D.; T. Y.; Medicus, Bradford; L. P., Sadbury; Surgeon; Medicus, Penge; X. Y. Z.; Medicus, Dudley; A. B. C., Egham; A. B., Sheffield; Medicus, Tamworth; Assistant; F. H.; Florence; Beta, Ashton.

Northern Evening Mail, Newcastle Daily Journal, Hampshire Advertiser, Leeds Mercury, St. Neot's Chronicle, Lincoln Gazette, Doncaster Chronicle, Newcastle Daily Chronicle, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Oct. 10th, 1878.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall	Remarks at 8.30 A.M.
Oct. 4	29·18	S.W.	53	57	92	67	51	..	Hazy
,, 5	29·14	S.W.	55	58	99	74	52	..	Foggy
,, 6	29·82	S.W.	58	62	80	70	55	..	Cloudy
,, 7	29·58	S.W.	59	62	98	68	53	0·10	Cloudy
,, 8	29·38	S.W.	58	60	98	69	57	..	Cloudy
,, 9	29·06	S.W.	55	59	94	64	54	..	Cloudy
,, 10	29·34	S.W.	56	58	96	64	56	0·13	Raining

Medical Diary for the ensuing Week.

Monday, Oct. 14.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Tuesday, Oct. 15.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Anatomy of Molluscum Contagiosum; Non-congenital Lymphangiectodes (living specimen); Conclusion of a Case of Multiple Sarcoma; Further Illustrations of the Histology of Rodent Ulcer; Gangrene of the Penis; and other Specimens.

Wednesday, Oct. 16.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Oct. 17.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HARVEIAN SOCIETY.—8½ P.M. Dr. Eastes: "The Phenomena of Hystero-epilepsy."—Mr. W. Sedgwick: "Clinical Notes on Poisoning by Chloral-hydrate."

Friday, Oct. 18.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Oct. 19.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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